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CONTENTS Page 1. INDEX TO ADVERTISEMENTS Page 2.

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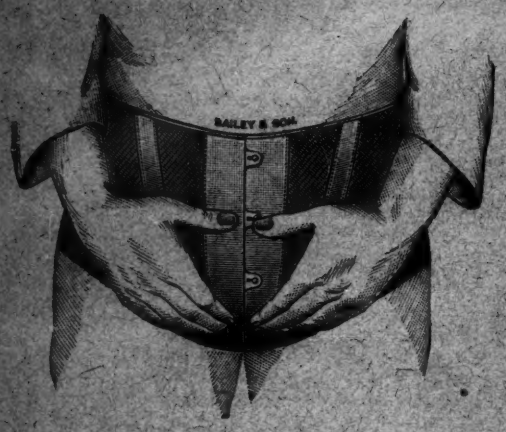

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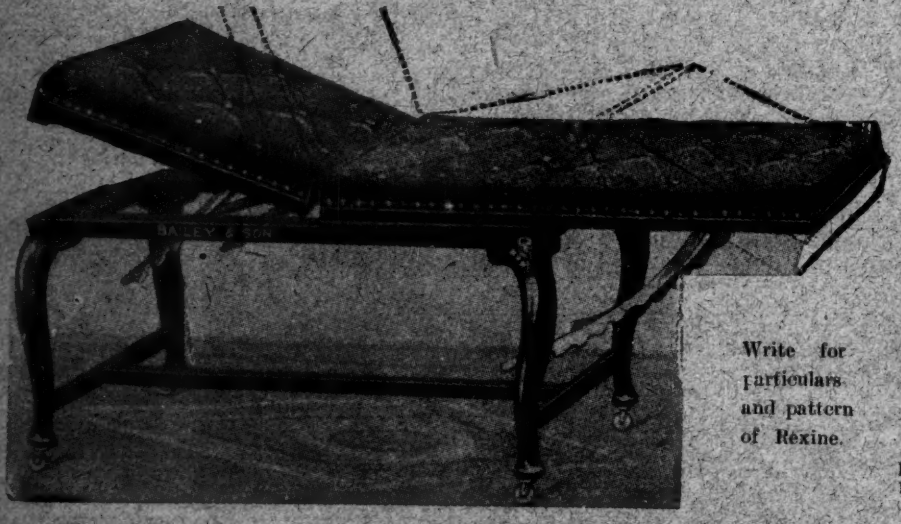

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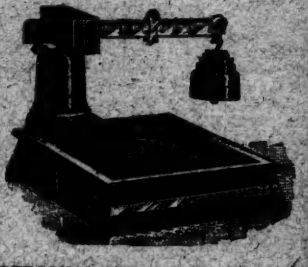

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AN ACCOUNT, WITH COMMENTARY,

OF

A CASE OF SPLENECTOMY

IN ADDENBROOKE'S HOSPITAL, CAMBRIDGE,

UNDER THE CARE OF

SIR CLIFFORD ALLBUTT, K.C.B., F.R.S.,

L. HUMPHRY, M.D., F.R.C.P., F. DEIGHTON, M.B., M.R.C.S.,

AND

DOROTHY C. HARE, M.D., B.S.LOND.

SPLENIC ANAEMIA, that is, a progressive "secondary" anaemia with enlargement of the spleen, is probably more common than was supposed before the comparatively recent investigations of Sir W. Osler and others drew the attention of the clinician more definitely to its characters. During the autumn of 1915 three cases of this malady came under the care of one of us (C. A.) in the Addenbrooke's Hospital. (Malaria has been unknown in Cambridgeshire for more than forty years.) One of these cases was seen once or twice only and lost sight of; the second was in a little boy (aged 6 or 7) who presented all the now well-known features of the disease. After long consideration it was decided to remove the spleen, an operation to which the mother gave her consent; unluckily however the boy got to hear of our intention and howled until the mother's resolution, not unnaturally, gave way, and he was removed. The case was a severe one; haemorrhages, intestinal and other, were frequent, and probably the boy is no longer living. In this case Dr. Dorothy Hare and Dr. Humphry took much pains to perfect the method of testing for corpuscular fragility, and Dr. Hare, on repeated examinations, found the fragility normal. There was no other point in it of sufficient importance to detain us. The third case was as follows:

Mrs. K., aged 45, was admitted under the care of Professor Allbutt on October 25th, 1915. She was extremely prostrate, blanched, and short of breath. The colour of the face—save some venous injection on the malar bones—and of the whole body was that of an old tallow candle. No discoloration could be found on the skin; indeed the axillary and other folds of the body were, like the skin elsewhere, unusually pallid. No notable emaciation. The mucous membranes were almost as pale as the skin. The teeth were ill kept, two of them loose and protruding. These teeth were drawn without any excessive bleeding; the rest, in consideration of the woman's state, were not extracted, but the mouth was thoroughly cleansed and the gums dressed daily with iodine. There was no definite pyorrhoea. The tongue was pallid, but quite normal in appearance and soft in its substance. The spleen was moderately enlarged, fairly soft, and a little tender; the notch distinct. No sign anywhere of enlarged lymphatic glands. Excepting haemic murmurs and a very feeble pulse nothing of importance was noted on the side of the heart and blood vessels. The ankles were a little puffy. The liver was apparently normal, but the edge just perceptible below the ribs. No signs and no history of haemorrhages; but occasional passing attacks of diarrhoea or vomiting. From the time of admission onwards the charts showed a continuous pyrexia, as recorded in the annexed reprints of them.

As the woman grew steadily worse, and the occurrence of haemorrhages was feared, it was decided, after careful consultation with colleagues, and especially with Mr. Deighton, to remove the spleen. The patient at last gave her consent, and on December 3rd the operation, to be described by Mr. Deighton, was performed.

Operation.—The abdomen was opened by a vertical incision through the upper part of the left rectus; a few adhesions were met with. The spleen was then gently brought into the wound, the lieno-renal ligaments and gastro-splenic omentum were tied and divided. The pedicle was then transfixed and ligatured in three portions with interlocking ligatures; there was hardly any haemorrhage. The wound was then closed.—(F. D.)

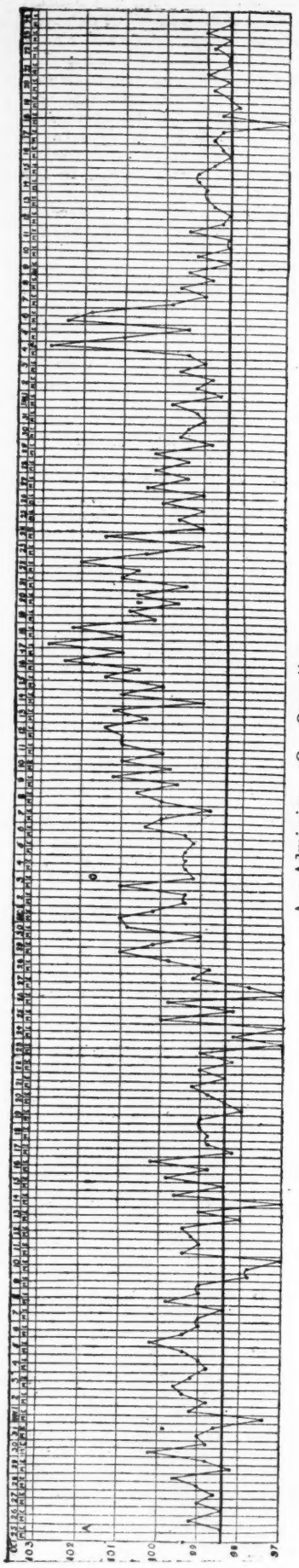
The spleen weighed 1½ lb. Histological examination showed nothing abnormal.

The patient then came under Dr. Humphry's charge, and for a few days after the operation suffered a good deal. So severe an operation was a great trial to a woman disheartened, anxious, and very feeble. She suffered also for some days rather severely from the after-effects of the anaesthetic; the stomach was upset, and food ill tolerated. Not only so, but, as recorded on the charts, the pyrexia, after a promising fall towards normal, became still sharper. Evidently, as the appended blood counts will show, a great commotion was set up in the blood factories. However, on December 28th—as seen in the charts—the pyrexia began to fall, and on January 5th was settling down when another sudden rise took place, coincident with an accumulation in the colon. Notwithstanding, during these weeks the patient was obviously rallying; a little bloom of colour and a little ray of hope brightened her face, and she began in small ways to help herself. And happily this rise of temperature proved to be the last; thenceforward the fever ceased, and on January 24th she was discharged convalescent. For a week she had been sitting up and walking about the ward. Her appearance, if still somewhat anaemic, had greatly improved, and she felt able to return to her home duties.

On the blood counts taken at intervals during her stay in the hospital we need not dwell, as the appended records—all taken by Dr. Dorothy Hare—speak for themselves. The variations are closely in accordance with those displayed in the other published cases. There is an excellent tabulated collection of blood counts in splenic anaemia

Table showing Results of Blood Examinations.

Date.	Haemoglobin.	Red Cell Count per c.mm.	Nucleated Reds Counted per 100 Leucocytes	Total Leucocytes per c.mm.	Differential Leucocyte Counts.						Remarks.
					Polymorphonuclears.	Lymphocytes, Small and Medium.	Mononuclears, Large.	Hyalines.	Coarsely Granular Eosinophiles.	Basophiles.	
1915.	Per cent.				Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	
Oct. 22	33	2,980,000	0	4,500	72	23	—	2	—	3	Slight poikilocytosis.
Nov. 27	35	2,110,000	0	33,000	—	—	—	—	—	—	Period of irregular pyrexia from Nov. 25 to Dec. 3.
Nov. 30	—	2,030,000	—	11,000	—	—	—	—	—	—	
Dec. 13	36	4,000,000	2	36,000	77	—	23	—	—	—	Dec. 3 operation. Count 10 days after operation. The lymphocytes were chiefly large cells, not distinguishable from atypical hyalines.
Dec. 18	42	3,850,000	3.5	22,600	69	21	6	3.5	—	0.5	15 days after operation.
Dec. 29	40	4,270,000	1.5	17,200	57	26	9	5.5	2	0.5	26 days after operation.
1916. Jan. 8	42	3,480,000	2	27,600	68	27	3	1.5	0.5	—	33 days after operation. Pyrexia during three previous days.
Jan. 19	44	4,010,000	0	10,000	28.5	55	9	4	2	1.5	47 days after operation.
Jan. 23	—	—	—	—	33	47	13	7	—	—	51 days after operation.



A = Admission. O = Operation.

in Thursfield and Gow's paper in *St. Bartholomew's Hospital Reports*, Vol. L, part i.

As our paper is entirely clinical we need not enter into the obscure problems of splenic physiology. Suffice it to say—strange as it may seem—that this large organ, presumably with a function, or functions, so ample, may nevertheless be excised without ultimate, or indeed proximate, impairment of life. After some temporary commotion the body seems to settle down again to work without sensible shortening of its vital capacity. We have not yet data, it is true, to assure us that after splenectomy life may be extended to fullness of years, though some such patients are now under observation whose lives have been prolonged in apparent health for such periods as eight and ten years after the operation; two of Osler's patients have survived for nine and fourteen years (Ede). How this remarkable compensation comes about is variously explained; it is enough for the present to say that our experience is now sufficient to justify us in excising a diseased spleen if symptoms seem to require it.

Dr. Cuthbert Ede (in his M.D. thesis, Cambridge, December 10th, 1915) formulated the following conclusions:

1. No ill results follow removal of the organ; that is, of course, assuming that the operation is performed successfully and under favourable conditions.
2. The first and best marked change in the peripheral blood is an increase in the total number of the polymorphonuclear cells, and a large increase in the number of the red cells. This is instantaneous.
3. During the first year after the operation there is an increase in the absolute number of the lymphocytes.
4. Later these become normal in number, but eosinophiles are increased.
5. Finally the blood picture resumes a perfectly normal state.

Noguchi, quoted by Dr. Ede, comes to the same conclusions, and they are confirmed by our patient's case, and by Captain Jones's case in this JOURNAL, February 5th, 1916. Dr. Ede and others have suggested that in these cases of splenic anaemia the fragility of the reds is increased; to this point Dr. Humphry and Dr. Dorothy Hare gave close attention and care, but reported that in both the cases here mentioned (the boy and the woman) the fragility was not increased—was, in fact, normal.

Another curious point in recovery from splenectomy is that thereby the protective virtues of the body against infection are in no way impaired. (See Fuhs,[5] and our own case, January 4th to 7th.)

Osler and Rolleston have done much to elucidate and differentiate diseases of the spleen. Splenic anaemia they describe as follows (the quotation is a little abbreviated):

1. Diminution of the number of reds with a falling haemoglobin value per corpuscle.
2. No leucocytosis, usually leucopenia.
3. Enlargement of the spleen, not correlated with any other known splenic disease.
4. The tendency to gastro-intestinal haemorrhage.
5. The termination, if sufficiently prolonged, in hepatic cirrhosis with ascites (Banti's disease).

We are indebted to Dr. Ede for references to published results of operation (excision)—namely, Johnston,[7] Redman and Willard,[8] and Sidney Boyd.[9] The issue of the present series of operations is to show that the advantage of operating in an early and uncomplicated stage of the disease is enormous; the mortality is thus reduced in cases of this class from about 50 to about 10 per cent. Banti's figures are to the same effect. The most perilous event of the operation is that of intestinal haemorrhage, due perhaps to thrombosis of the splenic and other larger veins; but in cases operated upon betimes and under favourable conditions this event also is far less frequent.

It will be seen that our case, both in respect of its issue and of the behaviour of the corpuscles, was conformable with all the chief points of Dr. Ede's experience and that of the authors quoted by him.

NOTES ON TABLE (D. C. H.).

The most interesting feature of the chart is the record of the behaviour of the polymorphonuclears and lymphocytes. Even before the operation their numbers varied widely. The first count showed the leucopenia usually associated with the disease, but later there was a high leucocytosis, coincident with a period of increased irregularity of temperature.

After the operation the variations in the chart followed in the main the usual course. There was an early increase in the polymorphonuclears, succeeded in about six weeks by a sharp rise in the lymphocytes. A high polymorphonuclear count in the fifth week followed a few days of high temperature (January 4th to 7th), which supports the observation of Fuhs that removal of the spleen does not abate the capacity for reaction against infection.

The classification of the lymphocytes and hyalines in the early days after the operation presented some difficulty, and in the first count the large mononuclears are grouped together. Later the types became more distinct, but there still remained at the last examination a large number of these cells intermediate in type.

Before the operation the test for the fragility of the red corpuscles was carried out by Thursfield's method with unwashed corpuscles and gave a normal result. The urine was also tested for the presence of haemolysins and

a positive reaction obtained. The method used was that recently published by McKee (in the JOURNAL, October 23rd, 1915).

P.S.—On February 28th Mrs. K. presented herself again at the hospital for examination. She seemed quite well, and said she felt well. She had done all her housework almost from the date of leaving the hospital. Her tongue, pulse, temperature were all normal; appetite good, bowels regular. Complexion now well coloured, and all the tallowy tint had disappeared. She was strongly urged now to have her mouth attended to and all bad teeth removed from unhealthy gums. Dr. Hare made a fresh blood examination, which is here appended.—C. A.

Blood Examination, February 28th, 1916.

Haemoglobin	48 per cent.
Red blood cells	3,900,000 per c.mm.
White blood cells	41,000 per c.mm.
Differential leucocyte count:	
Polymorphonuclears	48 per cent.
Lymphocytes small and medium...	44 per cent.
Large mononuclears	5 per cent.
Hyalines...	1 per cent.
Basophiles	2 per cent.

Nucleated red cells, 1 per cent. of leucocytes counted.

REFERENCES (collected by Dr. Ede).
[1] Hutchinson, *Proc. Roy. Soc. Med.*, 1913, vi, Surg. Sec., 241. [2] Faltin, *Deutsch. Zeit. Chir.*, cx, 160. [3] Noguchi, *Berl. klin. Woch.*, 1912, ii, 1839. [4] Thursfield and Gow, *St. Bartholomew's Hosp. Reports*, Vol. L, Part 1. [5] Fuhs, *Amer. Journ. Med. Sci.*, 1911 cxlii, 713. [6] Rolleston, *Clin. Journ.*, xix, 403. [7] Johnston, *Ann. Surg.*, 1908, xlviii, 50. [8] Rodmand and Willard, *Ann. Surg.*, 1913, lviii, 601. [9] Boyd, *Clin. Journ.*, April 1915. [10] Banti, *Fol. Haemat.*, 1910, x, 33. [11] Otto, *Wien. klin Woch.*, 1910, 54. [12] Brill and Mandlebaum, *Amer. Journ. Med. Sci.*, 1913, cxlvi, 863. [13] Roth and Bernstein, *Arch. of Ped.*, 1914, xxxi, 340. [14] Chauffard, *Presse méd.*, 1907, xv, 345. [15] Thursfield, *Proc. Roy. Soc. Med.*, 1914, vii, Clin Sec., 84 [16] Mubsam, *Deutsch. med. Woch.*, 1914, 377. [17] Ziegler, *Deutsch. med. Woch.*, 1910, ii, 2410. [18] Seefisch, *Sem. méd*, 1914, 35. [19] Weber, *Quart. Journ. Med Sci.*, 1908, iii, 85. [20] Kidd, *Proc. Roy. Soc Med.*, 1913, vi, Surg. Sec., 231.

THE PRINCIPLES OF TREATMENT AND THEIR APPLICATION TO WOUNDS.

BY

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A WOUND is the local effect produced by an irritant on the tissues, and the consideration of irritation should include (1) its cause, (2) its effects, (3) the reaction to it, and (4) its complications.

1. *The cause* of irritation is described as an irritant. Irritants may be classified as (*a*) non-infective, and (*b*) infective; in the former class are included mechanical, chemical, electrical, and thermal agents, *x* rays, etc.; the infective are micro-organisms.

2. *The effects* of irritation are essentially destructive in nature, and they are general (shock) and local (tissue destruction). Whereas one has been accustomed to regard a wound as entailing a breach of surface, ordinarily produced by a mechanical agent, it is more in accordance with reality to include under the term all destruction of tissue, of whatever degree, in whatever situation, and by whatever variety of irritant brought about—for example, contusions, ruptures of viscera, fractures, burns, and injuries of all kinds.

3. *The reaction* of the tissues to irritation consists of vascular changes and cell proliferation (Rutherford Morison), vascular changes predominating in the acute and cell proliferation in the chronic form.

4. *The complications of irritation* result from (*a*) extension of the process of irritation; (*b*) superadded irritation; or (*c*) healing.

PRINCIPLES OF TREATMENT.

The principles of treatment are: (1) Remove the cause; (2) combat the effects; (3) assist the reaction; (4) prevent complications, or deal with them if they have arisen.

1. *Removal of the Cause.*

A sterile metallic body gives rise to a minimum of irritation sufficient for the production of a fibrous capsule, whereby the body is completely isolated. In a large proportion of cases missiles have come to be regarded as sterile, particularly rifle bullets presenting a small wound of entry. Under special circumstances, even where the bullet is apparently sterile, it may require removal—for example, when from its position it gives rise to irritation of nerves, interferes with the movements of a joint, etc. Operative measures for the removal of metallic bodies ought to be restricted where *x* rays are not available. It is unjustifiable, then, to do any extensive dissection, and difficult operations should be postponed till the base is reached. The commonest and most important indication for the removal of bullets, etc., is sepsis in the track. Should operative measures be determined upon, it is essential to bear in mind that too small an incision increases shock from the excessive retraction demanded, and the longer time necessary for the operation.

2. *Combating the Effects.*

There is general agreement that in the present campaign the degree of shock is greater than might have been anticipated from the nature of the injury, and there seems to be little doubt that it is due especially to excessive mental and nervous strain; in prolonged engagements, also, insufficient food, arising from the difficulty of its transfer, contributes in no small measure. Rough transport following the receipt of the wound, especially in motor ambulances over paved roads, is responsible for a considerable increase in the degree of its severity.

The requirements of the milder cases are met by a good meal, with some tea or cocoa, immediately followed by quiet and sleep. In the more severe cases, rest, with the foot of the stretcher elevated, is essential. Should pain or restlessness be present, morphine must be administered hypodermically. It is remarkable what tolerance to the drug these patients exhibit, half a grain being a regular and not infrequently inadequate dose; it is of advantage as a prophylactic before transporting the patient from one place to another. Stimulants, whether by the mouth or hypodermically, must be given with caution, the rule being "repeated small doses." For example, one tenth of a grain of strychnine will increase the shock (Crile), while one-fifth of that amount given perhaps each hour will benefit the condition. Should the temperature, as is usual, be subnormal, no time must be lost in raising it by the careful application of heat, internally and externally. Lastly, in the worst cases, the chief stand-by is transfusion in one or other of its various forms. The use of saline is the commonest method, and it may be given per rectum, subcutaneously, or intravenously. Of these, the first two are preferable for ordinary use, since absorption takes place according to demand, while the rectal method has this commendation—that sepsis is almost impossible. With most people the intermittent administration of saline per rectum is more successful than the continuous, and it should be given, according to the tolerance of the individual, six to ten ounces every three or four hours. Half an ounce of brandy may be added to the injections, making an average of three ounces for an adult male in twenty-four hours. Auto-transfusion, though useful, is much less in vogue; rectal injection of one pint of hot coffee and half an ounce of sugar is an excellent substitute.

In the treatment of the local condition wounded blood vessels must be dealt with first, as haemorrhage predisposes to both shock and sepsis. Temporarily any of the first aid means may be utilized, while for permanent arrest the method must be chosen according to the case—for example, pad and pressure, forcipressure, ligature, suture or vessel suture, the last being reserved for vessels of some size. The effects of haemorrhage are counteracted ideally by blood transfusion, but, more commonly, saline transfusion, in one or other way already mentioned, is the means resorted to.

The importance of ascertaining that no tourniquet is left on a limb too long (anything above two hours is dangerous) cannot be too strongly emphasized.

3. *Assisting the Reaction.*

The reaction of the tissues, consisting of vascular changes and cell proliferation, is usually directed against both cause and effects. When dealing with the cause it is called "inflammation," and when dealing with the effects, "repair," but it is essentially similar.

Where open wounds are aseptic the first essential is to close them, but in war wounds do not often fulfil the

necessary conditions, and such treatment is frequently contraindicated by the presence of sepsis.

4. *Complications.*

Irritation may extend by continuity, contiguity, lymphatics, or blood stream. The mechanical irritants under consideration only produce further mischief by continuity or contiguity, and by the time the patient comes for treatment all the damage likely to occur has been done. Treatment, then, resolves itself into dealing with those complications which have arisen—for example, injuries to vessels, nerves, bones, joints, or viscera, such as brain, lung, liver, gut, etc.

Superadded irritation must be either non-infective or infective, though in warfare they are usually found together. This is especially so in shell wounds, into which portions of clothing, soil, etc., are commonly driven, and these are necessarily infected, calling for early antiseptic dressing of the wounds; as a prophylactic antitetanic serum, 1,500 units administered as soon as possible, has established a well-merited reputation. Antisepsis vaccine, given much less frequently, is likely also to be of value, when the problems of vaccine administration are more completely worked out.

All war wounds must be regarded as septic in greater or lesser degree, and a large number of them contain additional non-infective material as well which must be removed.

Removal of the Irritants.—Keeping in mind the limitations imposed by an absence of *x* rays, three types of mechanical removal are at the surgeon's disposal, the wound being well laid open (1) by forceps or some such other instrument, (2) by irrigation, and (3) by the introduction of hydrogen peroxide, the mechanical agent being the oxygen liberated. No extensive search, especially in the dark, should be made. An extension of this method is advocated by many surgeons—namely, excision of the whole wound, whereby it is hoped to remove all irritants in the tissues forming the walls of the wound. The telephone probe and *x* rays, as accessory to one or other of these methods in the case of metallic irritants, require no comment. Should a mechanical irritant not be removed by one of these methods, it is usually necessary to leave it *in situ* and allow the tissues to deal with it themselves, in which case it is either encapsulated or attempts are made to extrude it, usually through an abscess. The other type of irritant present is infective, the commonest being the ordinary pyogenic cocci, though others are often present, including the *B. coli* and several varieties of anaërobes. These may be removed by the means above described, but, short of excision of the wound surfaces, it is not likely that they will. After the lapse of a few hours excision of the wound is no guarantee that they have been entirely removed, and if all are not removed the opening up of large new surfaces to infection may lead to serious complications. Seeing that these methods are not likely to meet with success in the removal of micro-organisms from wounds, strong antiseptics should be employed as the lesser of two evils. These, in varying degree, act on the organisms present in the tissues of the wound-wall, and hence the method is used as an alternative to that of excision. Pure carbolic acid, from its penetrating antiseptic power, is still the best of these chemical agents, though numerous others are in common use. Hypochlorous acid is at present on trial, and so far results are exceedingly good. The actual cautery is an efficient though destructive germicide, and is no longer in vogue.

Assisting the Reaction.—Acute active inflammation is always the reaction to infection with micro-organisms, and its chief function is to deal with the irritant itself. The redness and heat, and in part the swelling and the pain, are due to the increased vascularity present, the chief part of the swelling and pain being due to fluid exudation with increased tension in the part, while the impaired or arrested function is controlled by the pain. The increased metabolism in inflammatory fever is associated with the production of bodies antagonistic to the organisms and their products, while the general impairment of body function, by enforcing rest, provides for a minimal expenditure of energy. Locally the increased vascularity and fluid exudation combat the organisms and their products both chemically and physically, while the impaired function, governed by the pain, produces the rest necessary for a maximal beneficial effect.

Thus we assist the increased metabolism and avoid the evil effects of impaired body function, by keeping the patient in the recumbent posture, keeping up the body strength by easily assimilable liquid nourishment (the thirst indicates the need for fluids), and regulating the excretory action of the lungs by fresh air, the skin by hot bathing, bowels with saline, and kidneys with abundant fluids. Locally, rest and elevation of the part, the application of moist heat, and Bier's bandage or suction glasses, all favour increased blood flow, while hypertonic saline dressings, if they can be borne, assist in marked degree the increased flow of lymph. On the other hand, the avoidance of ill effects of the local reaction is mainly confined to the relief of tension in the tissues by timely incision, and also the provision of efficient drainage, whereby infective material is removed. This includes the evacuation of abscesses, and the careful emptying of all pockets where discharges may be retained.

Incomplete healing may be due to imperfect reaction either to the cause or to its effects, but the commonest cause is superadded infection inadequately combated. Where healing is complete complications are due to the formation of fibrous tissue in the soft parts, with its subsequent contraction, or callus where bony tissues are involved. Treatment is chiefly preventive either by accelerating healing and so diminishing the formation of fibrous tissue, or controlling deformity by careful attention to position, splinting, skin grafting, etc. Should the complications have arisen they must be dealt with according to their nature—for example, adhesions separated, contractures divided, callus removed, etc. The preventive treatment alone is of immediate importance.

TREATMENT OF HEAD INJURIES.

In a clearing hospital it is not possible to watch results unless exceptionally, as the cases are sent out as soon as they can be safely removed. Though I have treated all wounds that have come under my care by the same method, I have only been able to watch throughout their course some of the skull injuries, which have been detained on account of their serious nature. They were treated as follows:

1. The wound was dressed, the lotion used for the removal of the old dressing being 1 in 20 carbolic. Mercury perchloride was contraindicated because iodine had invariably been used lavishly, often producing blistering. If further investigation proved to be necessary, the wound was packed with spirit gauze wrung out of 1 in 3,000 mercury biniodide.
2. An anaesthetic was administered.
3. The head was washed with 1 in 20 carbolic lotion, and the hair shaved off whilst the carbolic was dripped on, following the razor.
4. The bruised edges of the wound were trimmed with mouse-toothed forceps, knife, and scissors, and the wound dried and swabbed throughout (including exposed brain) with pure carbolic acid. In more extensive wounds the excess of carbolic was neutralized by methylated spirit, otherwise it was mopped away.
5. A large flap was reflected, usually with the wound in its centre.
6. The skull was trephined, all loose depressed bone removed, and projecting edges nibbled away. No extensive search was made for distant pieces of bone or foreign body. Bleeding was arrested by fine suture, muscle tissue, or packing.
7. Exposed brain and dura mater were covered with spirit gauze wrung out of 1 in 3,000 mercury biniodide, the free end being pulled through the original wound. A tube was or was not introduced.
8. The operation wound was sutured with silkworm gut.
9. Three days later the gauze was removed; the tube might or might not be removed; if left it was removed at next dressing.
10. Where the original wound resembled an incised wound secondary sutures were inserted on the fifth or sixth day. In punctures this was not necessary, and in extensive laceration and destruction it was not possible.

The number of skull wounds operated upon was 14. Flaps were always sutured up at the time of the operation, and in three cases secondary suture of the original wound

was possible, each time with success. In no case was the wound dressed in less than forty-eight hours. In only one case did sterilization of the track of the projectile as far the dura mater fail; in this case the sepsis was mild, and was limited to the track, the flap uniting by first intention. There was one death, from meningitis and cerebral abscess, one week after operation; outside the cranial cavity there was no sepsis in this case. In only one patient was there any suggestion of a hernia cerebri. This was in a case with most extensive injury, a large lacerated scalp wound, with marked comminution and depression of skull and extensive laceration and discharge of brain substance. There was also considerable intracranial haemorrhage with pressure symptoms and paralysis of the left arm and face. A large clot was removed at the time of the operation, and subsequently a small protrusion of brain occurred. The protrusion gradually diminished and the face and arm steadily improved. No untoward symptom developed.

NOTES ON WAR SURGERY.

BY

A. MACKENZIE FORBES, MAJOR C.A.M.C.,

A SURGEON TO A GENERAL HOSPITAL IN FRANCE.

ALTHOUGH I cannot speak with any great authority on the subject of the treatment of wounds seen in this war, because the contingent of which I am a member remained on Salisbury Plain until early in 1915, and their medical units were the last to be established in France, yet five months of active surgical service in that country has enabled me to make certain observations which will, I trust, be at least suggestive to some who, like the writer, are placed on "the lines of communication," where atypical rather than typical methods of treatment are necessitated.

In dealing with wounds in hospitals on the lines of communication, the first aim of the surgeon is to save the soldier's life, and the second aim is to save the part affected, the two greatest dangers to both being infection and secondary haemorrhage.

In considering the first it must be realized that the great majority of wounds seen in the hospitals of the lines of communication are infected. Of these infections one sees principally three varieties, which should be considered in order of their ordinary seriousness.

I. *Infection by Tetanus.*

This fortunately is rare because of the faithful use of antitetanic serum at the front, yet because prophylactic treatment is efficacious, whilst treatment of the incident infection is more rarely so, it is wiser to assume that all our wounded have been infected by tetanus, and that all have not been treated with a prophylactic dose of serum at the front. It may be argued that those who have received antitetanic serum are usually tagged, with an inscription giving the dose administered, when they are received at the hospitals of the lines of communication, but the importance of the wounded being protected against tetanus and the fact that the immunity conferred is probably only temporary makes it wise to consider the administration of a second dose in these hospitals. There is but one danger in this practice, namely, that of anaphylaxis, but this danger may be disregarded, and a dose of 1,500 units of antitetanic serum administered subcutaneously on admission, provided always that the patient has not been so treated at a date earlier than one week previously. In this latter case the antitetanic serum must be administered in a different manner; thus, the dose of this serum must be divided into two parts. The first part, containing 1 c.cm., should be given intravenously. The remaining part should be administered subcutaneously half an hour to an hour later.

Two weeks after this administration of antitetanic serum in the hospitals of the lines of communication the administration of another dose should be considered, and if found necessary it should be given in a divided dose, both intravenously and subcutaneously, as already directed.

II. *Infection by Gas-producing Organisms.*

These are of the anaërobic variety. Of these, the bacillus of malignant oedema is the most common. More rarely found is the *Bacillus aërogenes capsulatus* (Welch). Infections by these are characterized by their virulency. It is necessary, therefore, to recognize them early, because at first the infection is local, although usually of a deep wound, and practically always of the lower extremity.

A wound so infected is dirty in appearance. It contains pus, or pseudo-pus, with a faecal-like odour, which is similar to liquid faeces in colour and consistency. The parts about it are swollen and congested, but at this stage no characteristic crackling may be elicited by palpating the surrounding tissues; thus it may be difficult to differentiate it from an infection by the colon bacillus. Later there may be localized gangrene around the wound about which crackling can be elicited on careful palpation. In some cases this latter may be noticed without a suggestion of gangrene. The condition at first is really one of cellulitis. The patient's general condition, which is due to toxaemia, is often far worse than is suggested by the local lesion. In those cases where crackling is found on palpation there can be no doubt as to either diagnosis or treatment. In the earliest stages, where there is doubt as to the diagnosis, open freely and drain. Where crackling is found, treat at once as one would a fulminating cellulitis, when the freest incisions and drainage are indicated. At the same time hydrogen dioxide may be injected into the surrounding subcutaneous tissues in an attempt to limit the infection. The infected area must be kept under constant surveillance, always remembering that to save life amputation, in the case of a limb, may be necessitated at any time. When gangrene has appeared, amputation is necessary. This may be done through the emphysematous tissues if the open methods to be described later are employed.

In dealing with infections by gas-forming organisms it is necessary to keep in mind that the patient's life is endangered from the very beginning, and, although very free incisions may relieve the patient even at this date, in cases where we are dealing with a cellulitis alone, in a great number amputation with free drainage will have to be resorted to in the end, in order to save the patient's life.

III. *Infections by Staphylococcus, Streptococcus, and Mixed Infections.*

These are the more ordinary conditions met with—indeed, are seen in the majority of wounds. They are combated by drainage; often drainage of the most thorough character is necessary, consequently this subject will deserve special study.

It is generally known that, of all wounds, shell wounds require the greatest care. Where there is any possibility of portions of clothing being retained in the wound, cleansing and free drainage must be instituted. If these wounds are superficial, they may often be laid open with advantage. If the wound, on the other hand, is deep and filled with blood clot, this must be cleaned out and care must be taken to tie any bleeding point, but, if none is discovered, such wound will demand special care, as in such not only is secondary haemorrhage to be feared, but concealed haemorrhage may be followed by clot formation and infection. In dealing with all these wounds, primary suture must never be considered, but rather suture to maintain the patency of the wound is often of great advantage. The excision of superficial wounds is advised with the closing of new surfaces, but no wound in which suppuration can be expected is ever closed.

The method of laying open infected wounds by means of sutures, already suggested, is worthy of consideration. Suppose, for instance, a piece of shell is projected under the skin and, more or less, superficial tissues for a distance of some inches. Its track is probably infected, and its surfaces necrosed. It is often found to be wisest to lay such track open, thus converting a tunnel into an open gutter; further, the cleansing of the wound can be hastened by invaginating its edges and sewing them perhaps even several inches from the wound. If this be done it will be found easy to remove these stitches and to bring the edges together when the wound is clean. The same principle is made use of in amputations. In the hospitals of the lines of communication amputations are recommended usually

only when they are necessary to save lives threatened by infection. In the majority of such cases it is unsafe to perform the ordinary classical operations because flaps may harbour infective organisms. Indeed it seems impossible in the majority of cases to procure an aseptic field; thus, often it has seemed wisest to perform simply a circular amputation, cutting through skin, muscle and bone all at the same level, and to leave the wound entirely open. Patients on whom this procedure is adopted are sent to England as soon as possible, where a second operation for the preparation of flaps and the closing of the wound is performed.

These circular amputations are, however, too wasteful, and if it is possible to save flaps, even if they cannot be used at once, it is wisest to do so. Here, then, the method described as "the laying open by means of sutures" is employed. It is my custom to save every portion of skin, fascia, and muscle which it is safe to keep; with these I make flaps at a later date, but at the time of the operation, to save infection, we invaginate them in the same way as a child having torn into vertical strips part of the stem of a dandelion will invaginate these to form a rosette. When invaginated the soft parts are sewn back, as suggested in wounds of muscle and skin. In this way we make a cone-shaped stump instead of a crater-shaped stump, as it appears before invagination. The bone in this amputation should be left as long as possible, because as soon as our cut surfaces are clean we stretch by traction towards the sawn extremity of the bone by means of tape fastened into these soft parts and secured to the distal extremity of the bone. By means of this traction, begun after the flaps are clean, we prevent the contraction of the soft tissues at a time when it is not yet safe to perform the necessary secondary operation of sewing the flaps in their final position.

After the primary operation, when the flaps are sewn back there can be no concealed pockets of pus. In the second stage, whilst the flaps, after cleansing, are being stretched on the bony shaft as a fulcrum, the tissues are under perfect control. It is only in the third stage, when the tissues being clean enough, the soft parts stretched enough, and we attempt the final operation of sawing off the excess of bone and uniting the flaps, that we are called upon to exercise special care for the protection of the limb.

For severe infections of the extremities the bath, or "constant drip," seems the most efficient form of treatment after free incisions have been made.

In the cranium we may have difficulty with infections. Our rule is to excise all wounds perforating the soft parts and before uniting the cut edges to make a careful examination of the skull in order to get some idea of the extent of the injury. Further procedures are only considered in a most conservative way. In a few cases we have endeavoured to prevent infection of an exposed and uninfected dura by placing a thin layer of absorbent cotton over the exposed area and sealing the opening with Horsley's wax. In one patient sterilized paraffin was used. Either dressing may be changed daily.

The laying open of infected wounds has been spoken of not only as a means of preventing collections of pus but of allowing the cleansing of infected surfaces. This latter is often difficult, and yet of the greatest importance in order to minimize the toxin absorbing areas. Recent suggestions point to the use of hypertonic salt solutions in order to secure lymph lavage. Some surgeons still employ the old antiseptic solutions. Possibly the hypertonic solutions show the best results within the first twenty-four to forty-eight hours after operative procedures. The milder antiseptics may have their place in the later days. Undoubtedly, however, the mechanical cleaning of the parts is of greater importance than either. With scissors much can be cleaned. The cautery also is valuable. At the time of Ambroise Paré this was the most reputed surgical instrument. The lapse of time has not detracted from its efficiency. It is not only a decided mechanical antiseptic, but it also causes lymph lavage, without pain subsequent to the actual operation—a point decidedly in its favour.

The saving of limbs in which there are compound fractures with coincident infections demands not only the employment of the means suggested but the most careful immobilization by appliances of such character that it is possible not only to dress the wounds, but, if necessary, to syringe or irrigate the infected channels. For such in many patients in my service plaster-of-Paris has been used. This dressing, when properly applied, is most satisfactory, especially if it be fenestrated, for drainage, lavage, and dressings. The windows for such purposes, cut in a plaster cast, are carefully swabbed with melted paraffin before each dressing. This is applied over absorbent cotton and fills the interstices between the plaster and skin as well as between the layers of plaster.

Besides all these methods for the treatment of infections, the local as well as the general effect of the sun's rays are often most marked. If it were possible to treat all infected wounds in the open air results would be better than at present, but, unfortunately, this principle, while recognized, has not yet been sufficiently recognized in military hospitals.

Local Treatment.

The local application of general principles is of sufficient importance to suggest the mention of some methods of local treatment which are used in this service.

Fractures about the Shoulder-joint and Upper Third of the Humerus.

For obvious reasons patients reaching a base hospital with compound fractures of these regions rarely show either wound of entrance or exit to be in the outer wall of the axilla, thus the axillary surface is usually most suitable for splinting when there is a fracture of the upper third of the bone. In these fractures, then, we have sometimes employed a triangular splint which can be fashioned in wood by a carpenter in fifteen minutes. One side of this triangle runs from the apex of the axilla to the great trochanter of the femur of the same side; the second side of the triangle supports the patient's extended arm in a position at right angles to the body; the third side simply unites the other two sides of the triangle. Any degree of traction can be used with this splint by the use of adhesive plaster ("stickers") if the supporting arm of the triangular splint has been made long enough. Most wounds can be dressed without disturbing the splint. The position of the third or uniting side of the triangular splint can be changed easily, thus allowing of adduction of the patient's arm when this assures better reposition of the fragments.

Compound Fractures of the Middle and Lower Thirds of the Humerus.

If we are dealing with compound fractures in these regions we often use a small Thomas knee brace, with extension by means of adhesive plaster, as now generally recommended in war surgery. In addition, in this service, we usually fix the fractured ends by means of a plaster-of-Paris collar applied close to the skin and fenestrated at the seat of the wound for dressings, as already described.

Compound Fractures about the Elbow.

These we usually treat in much the same way, because of the necessity of getting drainage, which is facilitated by extension and immobilization made possible by the knee splint combined with the plaster-of-Paris dressing. In very severe fractures about, and implicating, the elbow-joint, it is often safest to excise the whole joint, after which operation a fairly good arm may be expected.

If at all possible, all arms should be saved, no matter how mutilated they may seem at the time of the patient's entry into hospital. Orthopaedic surgery has so advanced in recent years that an arm whose function on the admission of a patient may seem to be irretrievably destroyed may, if saved, by judicious treatment be made into an instrument far superior to the best artificial arm available. The patient when examined may be unable to move his fingers; there may be no function at the wrist. Neither loss is sufficient to condemn the arm. If consistent with safety, we should persist in an endeavour to keep the injured member.

Compound Fractures of the Femur.

Compound fractures of the upper third of the femur are often most difficult to treat; indeed, past experience teaches that many femora so fractured have eventually to be amputated. With the abduction splint recommended by Mr. Robert Jones of Liverpool many of these may be most efficiently treated, yet there are some in whom it is

impossible to irrigate or even dress without moving the thigh if so treated. For these, because immobilization is as important in clearing up the infection as in securing bony union, greater security is demanded. The most difficult form of treatment is often, in this fracture, the most satisfactory in the end; thus the fenestrated plaster-of-Paris spica is recommended. Such a cast, if carefully applied during strong extension and abduction of the leg, if reaching from the nipple to the toes of the injured side, will assure perfect rest and ample opportunity for cleansing the wound by irrigation or the syringe. In such plaster splint the bed-pan may be used and the patient transported any distance in comparative comfort. Plaster-of-Paris will help to save both life and limb, but it must be properly applied by one who is willing to remove it if necessary, thus sacrificing hours of labour if there is any suggestion that some unknown change or affection is taking place underneath the plaster.

In treating fractures of the middle and lower third of the femur, whilst one may in certain cases prefer the use of plaster-of-Paris, the Thomas knee splint is usually a most efficient form of fixation. With this not only may extension and fixation be secured, but the latter may be rendered doubly sure by the coincident use of one of many forms of splints or splinting.

Compound Fractures Implicating and Injuries Penetrating the Knee-joint.

In dealing with injuries to the knee-joint it must be realized that they present one of the most serious problems of surgery. If this joint is penetrated by infective material, and especially if, added to this, there is an injury to either of the great bones forming the joint, life is endangered. Thus treatment of such wounds demands the greatest care. We should here, whilst endeavouring to save the joint, always bear in mind the fact that it is easier to save the limb than the joint. Nearly all serious injuries to the knee-joint are followed by limitation of movement if not by ankylosis. This latter causes the greatest inconvenience. We may well, then, consider whether it is worth while attempting to save a leg in which ankylosis at the knee is the best we can hope for when this attempt to save is made at the risk of the patient's life, and when we know that amputation in the lower third of the femur allows of the use of an artificial limb with a knee-joint far superior to a natural, though ankylosed, knee.

The danger of suppuration in the knee seems to lie mainly in two things—first, the difficulty of drainage, and secondly, the liability of the infection to spread into the synovial pouches and about the intermuscular septa both in the thigh and in the leg. From a mechanical point of view, then, the head of the bed should be elevated in all such cases, in order to minimize the possibility of the spreading of the infection into the thigh, which often means the loss of our means of retreat by amputation through the lower third of the femur in patients in whom our conservative position of watchful waiting has become plainly untenable.

Because of the anatomical conformation of the joint, surrounded as it is by muscle and tendon, and formed by the close apposition of two of the largest bony surfaces of the human frame, drainage depends on the position in which bony apposition is least marked and gravity counts most; thus the outer side of the joint is the position of choice for drainage, and the flexed and strongly abducted and everted position of the thigh and knee is the best attitude of this member during any attempt made to save an infected knee-joint. Other means there are of draining this joint, but my firm belief that an artificial leg, as already suggested, is often better than an ankylosed knee impels me to refrain from describing methods which are indicated only in cases of such gravity that an immovable knee is the best result possible.

Compound Comminuted Fractures below the Knee.

Such fractures can be treated with drainage and almost any form of splint; that used by Mr. Robert Jones of Liverpool—the thin sheet-iron splint covered with boiler-felt—is as good as any, but here again my personal predilection is for plaster-of-Paris.

Compound infected fractures of the ankle can be treated by a variety of splints of a right angle in form. If the astragalus is fractured it is best to excise it.

Compound fractures of the tarsal and metatarsal bones are treated in much the same way as similar conditions of the bones forming the ankle-joint. Here conservative surgery again is the most profitable. The injury to a foot must be indeed severe before we are forced to amputate it, and it is only when our line of retreat—in this case a possible amputation through the lower third of the leg—is threatened that we are forced to consider the loss of the foot, provided always life itself is not threatened.

Wounds of the Thorax.

In attending patients with wounds of the thorax we should be willing to "wait and see," interfering only when called upon by the advent of untoward symptoms or conditions.

Wounds of the Abdomen.

For obvious reasons these rarely have to be dealt with on the lines of communication, but in these conservatism should be our motto. Of the few cases we have seen, those in which no operation was performed did best. The hospital nearest the front is the proper place for the treatment of these, and if patients suffering from abdominal injuries are carried there early enough, operations entirely inadvisable in our hospitals further from the firing line can be successfully performed.

In closing this memorandum, based principally on the work of my section in this hospital on the lines of communication, I would accentuate the fact that not only my experience but the experience of others has forged my credo of conservatism as the motto of war surgery.

WORK AT A BASE HOSPITAL.

IMPRESSIONS AFTER SIX MONTHS AS A SURGICAL SPECIALIST.

By W. RANKIN, M.A., M.B., CH.B.,

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SIX months spent as a surgical specialist at a base hospital teach one many things—above all, patience. While the variety of cases is infinite in the way of injuries to particular structures, the curious sites from which shrapnel is removed, etc., yet the actual types of operations done are limited, and to one who has had a large experience of emergency work in a busy city such as Glasgow the class of work presents little new or difficult.

Far too little credit has been given to the astonishing healing powers of the fighting man, who, up to the moment of his wounding, is in a state of health much above that of the usual hospital patient, as the result of his open-air life and abundant diet. When this is properly appreciated less will be said about the results of wonderful new antiseptics, and of methods which make the antiseptic era a back number, and of vaccines, etc. Nearly all the cases are septic, and if the work is to be done efficiently, expeditiously, and at a moderate cost, I believe it can best be with a technique in which antiseptics play a large part. A rigorous aseptic technique is a farce in such a type of work, is needlessly expensive, and will not, in my opinion, stand the test of twenty serious operations, packed into twenty-four hours.

Most of my actual operating was done with the assistance of my theatre sister only, though when I required further help I always had willing and able assistants. The procedure in an ordinary case of shrapnel embedded in muscle was as follows: The dressing gowns and towels had been sterilized by steam. The gloves and instruments were boiled, the lotion basin and trays were boiled or flamed out. The gloves were used wet out of sterile water. I scrubbed my hands with soap and water, soaked them for a short time in 1 in 40 carbolic lotion, drew on a pair of gloves, redipped my hands in the lotion basin, and when I had my gown put on I was prepared to start whenever the anaesthetist signified that the patient was ready. I prepared the skin with iodine and fixed the necessary towels with clips. I used the best probe in the world, an index finger, which becomes marvellously educated in seeking out the track of a foreign body through the tissues. I located the piece of shrapnel and removed it with a pair of forceps. I then swabbed out the

track with methylated spirits, made whatever incisions I considered necessary for the relief of the cellulitis, and packed the wound with gauze wrung out of spirits. A dry dressing was then applied and kept in position by strapping or any form of bandage which suited the part best. After the operation I scrubbed the gloves in a special basin, took them off and put them in the sterilizer, where they were reboiled, as was every brush that had been in use. After they had been boiled and put into their proper basins, the instruments went into the sterilizer. I did not change my gown unless it was visibly soiled. I did not wear long-sleeved gowns. The hand-basins which held the carbolic lotion were swilled out, wiped clean of any blood stains, and refilled with lotion. By the time the next patient was under the anaesthetic I was again prepared to begin. This technique was simple: each step was well defined; a brush was boiled, placed in a dish, picked out and used; put after use into a second dish, from this was placed in the sterilizer, and then became ready again for use. Nothing but carelessness could produce a hitch, and it meant a minimum of work to the staff who had lots to do when the rush came. I only lost one case from cellulitis or gas gangrene; in it a piece of shrapnel had tunnelled its way from the thigh to the retroperitoneal space over the brim of the pelvis, and efficient drainage was established too late. It was not always possible to arrange the cases in the degree of their infectivity, but so far as I could judge no case became septic or more septic as the result of coming after a particularly foul case.

Excision of wounds and any perfectly clean case I had satisfied me that my simple routine was quite efficient and therefore, for the type of work, sufficient. The rapidity of healing and the good results made me very slow to change my methods, though there were a few cases in which a variation to some other antiseptic or dressing did benefit. For the most part, carbolic lotion, iodine, and methylated spirits gave most satisfactory results.

Where I failed to find the foreign body I availed myself of the help of *x*-ray plates. I did not then succeed in every case, but the proportion missed was small.

The incisions I made were always free and were packed with gauze. I did not often use drainage tubing, and never when a vessel of any size was near the track of the wound. In the cases which came from the front with tubing inserted, the track left after its removal was so foul that I avoided its further use. I had no case of secondary haemorrhage of any importance; in the one case which recurred it was easily controlled, and for this happy freedom from an awkward complication I give credit to the free incisions and the gauze packing.

I early recognized that a superficial bullet or shrapnel graze is of the nature of a burn, and that if these apparently trivial wounds are not completely excised, they will remain unhealed for many weeks or months. All such wounds, as well as many other large and small superficial wounds and gutter and tunnelling wounds, were excised without delay. In some cases of wounds of the thigh and the chest wall the wounds after excision were over 12 in. long and had involved muscle. All the big wounds and nearly all the small healed without a stitch abscess, and the excision saved many weeks of painful dressing. At first I used to wash the wounds and mop them with spirit; afterwards I used Colonel Gray's simpler technique—painting the wound and the skin around with a 10 per cent. solution of iodine in rectified spirit before the excision. The excisions which did worst were those over the shin bone.

The line of excision should be in the course of the superficial nerves, not across them. There should be no tension in the sutured wound. Excision should not be performed when there is clear evidence of acute cellulitis round the wound. Multiple punctures and dressing for a few days will allow this to subside, and then excision can safely be performed. Fomentations make the worst possible preliminary dressing, as they cause the area to be soaked in pus.

In every case of scalp wound which came to hospital the wound was excised and the skull beneath examined. The whole scalp should be shaved, since neglect to do this leads to delay and trouble in the theatre, for often it is the unexpected case that has the depressed fracture. No man can by means of a probe correctly diagnose the extent and seriousness of the scalp wounds made in modern warfare; the wound must be excised, and the condition of the exposed bone examined with the finger and the eye. In this way one learns the number of cases which have fissured and depressed fractures and appreciates why such patients may have headache and other symptoms afterwards. To draft a man with a healed or healing scalp wound to the convalescent camp without having exposed the bone and examined it properly is to court a disaster sooner or later.

The elevation of depressed fractures, the trephining out of small discs where a fracture of the inner plate was suspected, and the evacuation of superficial brain abscesses were common operations; the results were good. Where there was a perforating brain lesion, deep penetration by shrapnel or a bullet, and hernia cerebri, the foreign body was removed when this could be done without danger to life; the further treatment was to apply compresses of alcohol to the exposed brain, but the majority of these patients died. I worked on two principles: (1) to make the skull opening no larger than was really necessary, and (2) to try and do at the first operation all I thought possible for the patient in the way of exploration.

Of the few amputations I did nearly all were partial amputations of hands and of fingers; one amputation only of the foot was done—after astragalectomy had failed to get rid of the infection. I had many cases of infected injuries, to the knee and elbow joints especially, and of compound fractures into these joints, which could have been saved a long convalescence by an early amputation, but free incisions, dressings under anaesthetics, and patience, both on my part and on that of the patients, enabled me to send them home with their limbs in a most satisfactory condition, some with the joints excised, and all glad that they had "stuck it" and happy in the possession of the limb. A run of cases may occur in which primary amputation is clearly indicated, but experience shows that by patience limbs can be saved which lack of judgement would have sacrificed. The surgeon should always consider the question from the point of view of the patient—say two years hence.

For fracture cases I followed the simple methods described in my handbook,[1] and with a good supply on hand of Gooch's splints, of Middeldorpf's triangles, and a few long osteotomy and half box splints I was never at a loss to get a patient into a state of comfort. Middeldorpf's triangle can be best fitted by means of short slings in place of ties and bandages; this plan was a boon in the cases of compound fractures when the splint required to be readjusted at the dressings. The use of these simple splints properly applied further up the line would save much distress during the train journey. Synovitis of the knee is very frequent, and I was at a loss at first to pick out the cases which would probably do well enough not to be sent home. Latterly I explored all with a fine needle on a good syringe, and in many cases, which gave no history of traumatism, I found the effusion to be blood-stained. These cases were transferred home, whilst the others, with clear effusion and no history suggestive of a loose cartilage or any other derangement, were treated by rest in bed, a Scott's dressing, and a posterior splint from the fold of the buttock to the heel. They usually made a good and rapid recovery, though I have no knowledge of their after-progress.

Many cases of painful and ingrowing toenail were sent to the base. The treatment was avulsion with, when necessary, a Mayo operation. The after-dressing is most important; it should be by a piece of gauze soaked in a 1 per cent. solution of picric acid, and applied moist over the raw surface. It was not removed for five or six days, and then the bed of the nail was invariably found to be healed and hard, so that the patient could be sent to the convalescent camp shortly afterwards.

Some apply wet dressing even after small operations, such as the extraction of a bullet lying superficially. By the time these cases arrived at the base the dressings were simply reeking pus poultices. Useful in a few selected cases no doubt, this form of dressing is absolutely unsuitable as a routine dressing.

The surgeon cannot detach himself from all responsibility for the anaesthetic, but he ought to be relieved as far as possible by being provided with a congenial colleague already an experienced anaesthetist. When a big rush of

work comes the anaesthetist is of more importance than the anaesthetic. Though open ether is my anaesthetic for choice, most of my colleagues had had the training in the giving of chloroform. To all of them I wish to express my thanks for help in many a long day's work. The use of nitrous oxide gas for short and painful dressings proved a great boon. Local anaesthetics and spinal anaesthetics were made use of in selected cases, but neither method is suitable when the staff is small and many cases waiting.

REFERENCE.

1 *The Elements of Bandaging and the Treatment of Fractures and Dislocations.* London: H. Frowde, and Hodder and Stoughton. 1913.

ULCERO-MEMBRANOUS STOMATITIS AND GINGIVITIS AMONG TROOPS ON ACTIVE SERVICE.*

BY F. B. BOWMAN, M.B.TORONTO,

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DURING the last few months my attention has been drawn to a freely communicable disease, which, while of a minor nature in so far as it rarely has a fatal issue, is nevertheless of serious import in that it very materially lowers the health and effectiveness of those attacked. I have found it widely prevalent among our troops, more particularly among men returned from the front. Without going into full details, I would here call attention to the symptomatology of the condition, its apparent causation, and what, in my hands, has proved a simple and rapid method of cure. I may state that these observations are based upon the study of more than 100 cases.

Symptoms.

Considerable attention has been given for some years past to pyorrhoea alveolaris, a condition in which small pockets of pus form between the tooth and the gum, so that pressure upon the gum just below where this abuts upon the tooth leads to the discharge of a drop of pus. American observers have shown that this condition is frequently associated with the presence in the pus infiltrating the tissues at the base of the pus pocket of amoebae, somewhat resembling those found in amoebic dysentery, and, like those organisms, acted on specifically by emetine, as demonstrated by Bass. Frequently pyorrhoea alveolaris can be cured by the exhibition of this drug; but not all cases of so-called pyorrhoea alveolaris show themselves equally affected by this treatment.

An examination of cases coming both from the front and from troops in the Shorncliffe area shows that in cases of this condition, both those presenting the amoebae and others in which they could not be found, the most striking feature revealed upon the examination of the smears made from the pus is the presence of what are known as Vincent's organisms in large, not to say preponderating, numbers.

Further study has shown that these same organisms are present in what appear to be excessive numbers in a spreading affection of the gums and the tonsils, which cannot be included under the term "pyorrhoea." Thus, upon the gums (particularly around the last molars), the tongue, mucous surface of the cheeks, and the tonsils (which are most frequently affected), ulcers are to be found. The ulcers tend to spread laterally, save in the tonsils, where they burrow deeply into the tissues. They are covered by a white, friable membrane easily removed, and then leaving a bleeding surface beneath. This membrane is different from that found in diphtheria, which is tough and easily comes away intact. The lesions may suggest syphilis, and indeed Vincent's angina† may be superimposed upon a syphilitic infection of the mouth and throat; but in uncomplicated cases of the condition the Wassermann reaction has always been found negative.

The condition of the mouth in advanced cases strongly suggests scurvy. The gums bleed easily, are injected, retracted from the teeth, and spongy-looking. The teeth are apt to become loose, and are often tender when tapped by a metallic instrument. In many cases they have become so tender that none but the softest of food can be masticated, and for weeks the men are unable to take the ordinary rations; as a consequence they become seriously run down. The breath becomes extremely fetid, and the patients complain of a foul taste.

There is always more or less glandular enlargement, the submaxillary and sublingual glands being most often affected. Although several authorities speak of a rise of temperature to 105° or higher, in the cases thus far examined from the British troops the temperature has varied between the normal and 102° F. at the highest. Accompanying this constitutional disturbance is lassitude and lack of "go." The most serious constitutional symptom, and one always present when the teeth and gums are affected, is severe depression.

What may be regarded as the acute malignant form of this disease is seen in noma, in which the necrotic tissue shows a dense massing of these organisms of Vincent.

We thus have the following conditions found associated with the presence of masses of the organisms in question:

1. Some (complicated) cases of pyorrhoea alveolaris.
2. Membranous stomatitis and tonsillitis.
3. Noma.

The term "Vincent's angina," in England at least, is generally understood to refer to a particular form of tonsillitis. Ulcero-membranous stomatitis appears thus to be the more satisfactory designation, unless we speak of "Vincent's disease."

The condition is clearly communicable. In our series of cases several were traced to a dentist who had treated a severe gingivitis for pyorrhoea, and the same day also the mouths of three other men; all three had contracted the disease, and were shown by stained smears to be infected with Vincent's organisms. In another case, while the disease had been unknown in two successive battalions that had occupied certain quarters in France, a third battalion using these quarters exhibited no less than 50 cases of the condition. The close association of troops either in camp or in the trenches, and using the same utensils, appears to favour the spread of the condition.

Vincent's Organisms, Bacillus fusiformis, and Spirochaetes.

If in these cases, by means of a sterile swab, a small portion of membrane or exudate is removed from the mouth and rubbed up in a little warm 0.85 per cent. saline solution on a slide, an examination with a dark-ground illuminator shows in all instances the presence both of spirochaetes and of characteristic fusiform bacilli. Both forms are motile; the fusiform bacillus passes backwards and forwards with a tumbling motion, and not steadily as is the case with the flagellate bacilli, such as *B. typhosus* and *B. coli*. If smears be made and stained, the clearest picture of these organisms is given by Giemsa's stain. Successful results are obtained with plain methylene blue or Loeffler's solution, which show the fusiform bacillus and the spirochaetes distinctly. The bacilli are not stained evenly, but are usually barred, with an occasional granule deeply stained situated anywhere in the organism. The bacillary forms are from 12 to 15 μ long, and vary in width from 1 to 5 μ. The spirochaetes are very slender and delicate organisms. The number of convolutions varies from 5 to 12, the usual number is 9. No membrane can be seen. In stained smears these spirochaetes have no definite relation to the fusiform bacilli present in the same specimen; they are found sometimes in large bundles, sometimes singly.

This Vincent's spirochaete can usually be distinguished from *Spirochaeta dentium*, which has commonly no more than five convolutions, and from the *Treponema pallidum* of syphilis, which has between five and twenty-five, and also stains faintly and with difficulty. *Spirochaeta refringens* (a form not uncommon in the mouth) is much coarser and has broad sections.

The organism has been cultivated by Tunnicliff, who states that she was able to obtain distinct transition from the bacillary to the spirochaetal form. We have obtained cultures by taking some of the exudate upon a sterile swab and rubbing this up with hydrocele or ascitic fluid, and inoculating the emulsion into a deep tube of peptone broth,

* The fuller paper, of which this is an abstract, will appear in the *Proceedings* of the Royal Society of Medicine, Medical Section.

† So called after Vincent, the French bacteriologist, who clearly laid down (in 1898 and 1905) the relation between these organisms and ulcero-membranous tonsillitis and stomatitis.

into which has been dropped a small piece of sterile kidney or liver from a rabbit. The tube is closed by a sterile rubber stopper which has passing through it a capillary tube. The tube is filled quite full of the medium, and on pushing in the stopper this rises into the capillary, which is immediately sealed off, thus affording a strictly anaërobic culture medium. At 37° C. the growth appears in a few days as a faint cloud above the sterile tissue in the tube. Usually this affords a great preponderance of fusiform bacilli; a very foul odour is given off from the medium, closely resembling that exhaled from the mouths of those affected. Starch-ascitic fluid cultures, prepared according to Rosenow's method of deep tubes, are also successful. In fact any ordinary culture medium containing serum or ascitic fluid will afford growths of the organisms under anaërobic conditions.

Thus far inoculations into the lower animals have been wholly unsuccessful in reproducing the disease, and so not only is the question of the identity of the two organisms still undecided, but also, as Koch's postulates have not been fulfilled, we lack the crucial demonstration that these organisms are the essential cause of the conditions here described. This much, however, is to be noted—that they are present locally in enormous number in all the conditions here described, and that with the disappearance of these organisms the conditions undergo healing. This last fact alone may be taken as adequate proof that if they are not the only, they certainly are an essential factor in the causation of these states.

Treatment.

In pyorrhoea alveolaris, where the amoeba is demonstrable, local treatment with emetine, as already noted, frequently brings about cure, but emetine is of no value in the more widespread conditions of ulcero-membranous stomatitis and gingivitis and Vincent's angina. For these conditions many forms of treatment have been recommended. Trichlor-acetic acid, carbolic acid, silver nitrate, iodine, and hydrogen peroxide have all been used with some success. As a spirochaete is present, arsenic in some form, from its well-known effect upon spirochaetes, would appear to be the ideal application. Of all arsenical compounds salvarsan is the least toxic, and, as a matter of fact, salvarsan has a marked effect upon the condition, even if used merely as a mouth wash, and would thus seem to be indicated. Its use among troops, however, is prohibited, both from its cost and on account of the instability of its solutions. This close association between pyorrhoea, with its amoebae, and ulcero-membranous stomatitis, suggested a combination of ipecacuanha or its alkaloid and Fowler's solution. These are compatible, and the following treatment has been found to have remarkably rapid and favourable results.

Vinum ipecacuanhae	℥ss
Glycerinum	℥j
Liquor arsenicalis ... ... ad	℥j

M.; flat mist. Sig.: To be used as a mouth wash; do not swallow. Label "Poison."

Where the gums only are affected the solution can be carefully applied to the gums and pockets around the teeth, after cleansing away the pus. A small applicator should be used. Where there is ulceration elsewhere in the mouth or throat, the ulcer should be thoroughly wiped out twice every day with the above solution. All patients, whether or not the gums be infected, are instructed to drop ten or fifteen drops of the mixture on to a tooth-brush twice a day and to brush the teeth and gums vigorously.

Employing this treatment the condition clears up with remarkable rapidity. Even in advanced cases, in my experience, the alteration in the state of the mouth is obvious in three days. The ulcers are seen to be healing; the foul odour of the breath disappears; the teeth cease to be tender. The general depression clears up, and within a week patients who before treatment could not masticate solid food, can eat such food without discomfort and with enjoyment. Swabs from the affected areas now no longer yield the fusiform bacilli and spirochaetes.

The diagnosis and treatment are both so simple and the results obtained thus far so satisfactory that I can confidently direct the attention of medical officers in charge of troops to the existence of this condition and to this means of bringing about cure. I shall be grateful if they will give me information of each case under the following heads:

(1) Name. (2) Unit. (3) Regimental number. (4) Date (approximate) of onset of disease. (5) Date when first examined. (6) Location of trouble. (7) Symptoms, local and constitutional. (8) Results of treatment.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

TRENCH FOOT AT HOME.

"POOR MAN'S GOUT" and "podagra" are complaints the conditions of which might be reconsidered beside those of trench foot. Here is a man with a swollen and a painful foot who has had abundant colchicum in the last three weeks, with little or no advantage. His past inebriety he admits, and he has had rheumatic affections before. A scrutiny of his leg, however, reveals the cicatrix of an injury of forty years ago, when the leg was broken, and it is legitimate to infer that nervous and circulatory functions in the limb are still obnoxious to that old injury. What recent happenings have been brought to bear? The patient has the explanation: He had been working on concrete and in cold and wet; the men had asked for big boots to protect themselves, but none were provided. In the case of this patient his sound leg had withstood the exposure; his weaker leg and foot had suffered; hence the pain, the oedema, and the other symptoms, which we call gout.

Those who look narrowly into the ways of the workman will be able to find an excuse, here and there, for his alcoholic habits. Hugh Millar has said that his fellow masons washed down the dust of their trade with deep draughts of ale. The miner, who turns to drink when he has left the shaft, wants something to counter the mephitic effect of carbon monoxide; and in many another case the inebriety of the labourer may plead the unmitigated rigours of his toil. My particular desire at the moment is not an exacter pathology of gout, but a sympathetic interest in any of its determinants in industrial life. Wellington boots, indeed, and rubber boots in the trenches; and for those who are working at home a proper equipment, too. The tools of the workman have from of old been put beyond the clutches of the creditor (Deut. xxiv, 6), but a greater loss to the workman is the power to use them; and so far as arthritis, in any form, is an industrial disease, its prevention is required.

Bristol. DAVID A. ALEXANDER, M.B., Ch.B.

THE CONTROL OF "DIPHTHERIA BACILLUS CARRYING."

RECENT papers in the BRITISH MEDICAL JOURNAL on diphtheria carriers prompts me to describe a simple method of ridding a carrier of the diphtheria bacillus.

I employed it in an outbreak of diphtheria which occurred recently at a military hospital in the Malta command. Eight carriers were discovered bacteriologically by Mr. Mitchell (sanitary officer of the hospital) and Captain Crofton (bacteriological specialist). The throats and noses were cleaned with gargles and douches of potassium permanganate. As the carriers did not seem to decrease, further measures were adopted.

In Peking I meet a good many cases of acute follicular tonsillitis, and, as the Chinese demand quick cures, I have been accustomed to paint the tonsils with 50 per cent. silver nitrate, whilst I have painted several of my colleagues' throats with 90 per cent. silver nitrate. One application of the latter and two of the former suffice to cure the tonsillitis clinically. I adopted this method in the diphtheria carriers. The pharynx, tonsils, and posterior nares were cocainized with 20 per cent. cocaine hydrochloride, using a forehead mirror, and these parts were then painted with 50 per cent. silver nitrate. The nostrils were plugged with gauze, soaked in 1 in 10 ichthyol in glycerine, the latter being the dressing I have found useful in ozaena, which is not uncommon in China, and as a dressing after submucous resection of the septum, done in the presence of ethmoidal suppuration. Swabs were

taken from the nose and pharynx before and after this treatment by Mr. Mitchell and examined bacteriologically by Captain Crofton. The positive swabs proved to be negative after two applications of this treatment.

Extreme care should be adopted in the application of the silver nitrate, otherwise severe spasm of the glottis is caused; the application must also be thoroughly done—that is, the posterior nares and tonsils and pharynx must be painted. By using this method the hospital was freed from the diphtheria carriers and reopened.

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British Medical Association.

CLINICAL AND SCIENTIFIC PROCEEDINGS.

STAFFORDSHIRE BRANCH.

The Heart in School Children.

AT the second meeting of the session, held at Stafford on February 24th, 1916, the President, Dr. F. M. ROWLAND, was in the chair, and Mr. PRIESTLEY read a paper on heart disease in elementary school children, which was based on a study of Staffordshire children. Diagnosis of heart disease in elementary school children examined at school inspections was, he said, difficult, owing to the fact that in a large proportion of the cases neither the children nor their parents or teachers made any complaints of discomfort, or only the most trivial and ambiguous ones. Diagnosis had to be based on cardiac symptomatology almost entirely. When care was taken to note every deviation from the normal signs or sounds of the heart, it was found that at least 40 per cent. of all school children exhibited them. Most of them were obviously trivial, but 7 to 10 per cent. of all school children exhibited them in a degree worthy of a special note. The larger part of these well-marked cases were haemic or functional, and not, so far as could be ascertained, associated with any gross permanent lesions of the heart. When these functional cases were eliminated by a critical and conservative scrutiny, not passing as organic any case that might possibly be merely functional, there was left about 1 per cent. of all school children suffering from "organic valvular" disease. Among the functional cases were examples of dilatation unaccompanied by any signs of organic disease. Some of them were due apparently to cardiac atony, others probably to transient toxaemias. Something over ½ per cent. of all school children showed functional dilatation. Of 676 cases of undoubted organic disease the various valves affected were: Mitral regurgitant 83.1 per cent., mitral stenotic 4 per cent., mitral regurgitant and stenotic 7.3 per cent., tricuspid 0.7 per cent., pulmonary 3.9 per cent., aortic 1 per cent. Of 622 children with organic heart disease observed over several years, 344 (55 per cent.) never at any time complained of any symptom that could be ascribed to the heart. The following analysis was given of the 278 (45 per cent.) who had discomfort at one time or another: Malaise only 145, cyanosis 57, dyspnoea 50, pain over heart 30, headache 20, fainting attacks 17, oedema 8, palpitation 4, sickness 3, sleeplessness 2, clubbed fingers 2, catarrh possibly due to venous stasis 2, heart failure and loss of compensation 2, epistaxis 1, cough on exertion 1, giddiness 1. There was a little overlapping in this classification, the same child in a few instances having more than one cause of complaint. In the non-complaining group there were examples of every sort of valvular lesion, congenital or acquired.

Some After-Histories.

Dr. COOKSON, in continuation of a paper read at the meeting held in February, 1913, on two cases of women of 28 recently operated on for carcinoma, gave an account of the further history of the cases.

1. Mrs. B., first operated on on January 22nd, 1913, for intestinal obstruction of unknown origin. Median incision; carcinoma of sigmoid found; colotomy performed. On January 27th sigmoid removed and end-to-end anastomosis performed. Six months pregnant at time; miscarried on February 1st. Went home very well on February 19th, 1913. She remained very well until beginning of November, 1913, but only saw her doctor on November 19th, who asked me to see her on 20th. No trouble with bowels, but had a hard nodulated mass in left iliac region. November 28th, 1913, operation. Nodule of growth found in abdominal wall, fluid in pelvis, and mass a large secondary growth in left ovary. Growth in abdominal wall removed and left ovary. The anastomosis site could only be defined by the scar in the meso-sigmoid, but there was a small plaque-like growth in the wall where the ovary touched bowel, and a small growth in the uterus. Owing to increasing pain I operated again on December 29th. Everything was so matted together then that I could only do a colotomy. During succeeding months pain became gradually worse, and at one time she took as much as 12 grains of morphine in pill a day, but still did her housework and even bicycled up to October, 1914. In November she took to her bed; vomiting frequent, face and legs swelled, growth involved the colotomy opening. She had haemorrhage from rectum. Practically took nothing but water and had complete obstruction for a month, dying on December 25th, 1914.

2. Mrs. R., cauliflower growth of cervix uteri. After some preliminary treatment, Wertheim's operation performed on January 6th, 1913. Wound broke down and had suppuration in pelvis, but recovered satisfactorily, and went home very well on February 19th, 1913. Heard occasionally that she was keeping very well, but on December 21st her doctor asked me to see her, and I found her dying. It was not possible to examine her satisfactorily, but there was no growth to be felt from the remains of the vagina. She was very distended and evidently dying of general peritonitis. The history was that she had had a temperature for a fortnight up to 103° at night, normal or subnormal in morning; that there had been a lump in the right iliac region, which had softened; and that the vomiting and distension had followed. It seems probable that this was a septic condition, and not due to recurrence.

Dr. Cookson also mentioned two other cases of early carcinoma, one because the patient was the same age as these two, the other because of the extremely early age for carcinoma of rectum.

Mrs. P., aged 28. A lump in left breast doubtful in nature removed first; pathological report, carcinoma. Radical operation performed August 31st, 1911; patient still free of recurrence.

Mr. H., aged 16, seen in consultation on January 26th, 1916; 6 ft. 1 in. in height, complaining of gradually increasing weakness, loss of appetite and flesh. Always from a small child subject to looseness of bowels, but for some eleven weeks the stools had been tarry, and he had had attacks of vomiting. Through the abdomen masses of faeces could be felt along the greater part of the course of the large intestine, and per rectum some 3 or 4 in. from the anus a growth, nodular, bleeding readily, affecting the whole circumference of the bowel and fixed to the sacrum and other parts. I did a colotomy, but he died eight days later unrelieved.

Reports of Societies.

DISCUSSION ON WAR INJURIES OF JAWS AND FACE.

AT the meeting of the Odontological Section of the Royal Society of Medicine on February 28th, the President, Mr. H. BALDWIN, in introducing this discussion, referred to the admirable organization of special dental treatment which he and some English colleagues had seen when visiting France lately. He thanked most sincerely the French and American dentists for their contributions to the exhibition and discussion. He urged the establishment of special hospitals in each command of the United Kingdom to deal with injuries of the jaws, and of a competent officer on the staff of the Director-General to advise on dental matters. Two fellows of the section were now serving as lieutenant-colonels in the R.A.M.C., and were fit men for such a post. Skilled dental aid should be called in at the earliest possible moment. The details of the making and adjustment of the necessary splints were obviously outside the sphere of the general surgeon, and could only be dealt with by the trained dental surgeon.

Mr. LEWIN PAYNE showed a series of slides and models illustrating his personal experiences. His conclusions were: (1) That nearly all jaw injuries require dental aid. (2) That dental treatment should be commenced early. (3) That the dental surgeon employed should be one already familiar with the details of treatment. (4) That these cases should be segregated.

Dr. HAYES, of the American Dental Ambulance in France, said there were twenty-nine centres of special dental aid in France. Cases were, however, often left too long in a general hospital. Cases at the special dental centres were often rightly allowed to remain in France on account of the very specialized nature of the treatment. The dental surgeon at the front should be equipped to make splints for immediate fixation. He emphasized the point of early dental treatment. They had treated 380 cases, of which 30 were shown by photographs in the exhibition.

Dr. HOTZ, of Paris, also dwelt on the evil following delay in calling in dental aid. In some of his cases there was practically no access to the mouth when he first saw the patient. Often only an intra-oral splint was needed, but only a dentist could make it. He made all his splints in vulcanite.

Mr. J. F. COLYER spoke of his experience at the Croydon Military Hospital, where there were 200 beds for jaw injuries and at present 130 cases. In dealing with ununited fracture of the mandible he had obtained excellent results by extracting the tooth on either side of the line of fracture; some of the cases were six to twelve months old. Where there was only a small loss of bone he had obtained bony union by extracting the molars of the smaller posterior fragment, and if necessary their opponents, thus allowing the posterior fragment to be tilted up by muscular action and come into contact cornerwise with the anterior fragment. He preferred good bony union in such cases to exact dental occlusion. Before fixing a splint he removed all sources of sepsis. An outside splint gave comfort by resting the part. He had instituted a dietetic course, beginning with fluids and gradually hardening, to teach the patients to eat. Bringing together those similarly afflicted had been a source of great comfort to many who had found life intolerable when alone in their misery.

Sir FREDERIC EVE had used phosphor-bronze wire to stay the fragments apart in a case of resection for fibrosarcoma. Some twelve years later they were embedded in fibrous tissue. He had used bone grafts taken from the rib in two cases and these seemed to be successful. The periosteum was stripped off. He did not think plating advisable in cases of gunshot wounds. Wiring or splints were better.

The discussion was resumed on March 6th, when Mr. W. HERN showed slides and models of cases under his care. He had found simple wire splints most useful. He spoke of the good results of drawing the centre fragment forward and fixing it to the maxilla in cases of double fracture of the mandible. In these cases the centre fragment was displaced backwards and downwards.

Mr. HOPSON said that he had seen salivation follow the use of ungilded German silver splints. He showed a case of bone-grafting described below.

Mr. S. P. MUMMERY thought that in cases in which loss of bone did not exceed ¾ in. in the mandible, the fracture might be put up in good occlusion with a reasonable hope of bony union. Where contraction and approximation of fragments had already occurred slow separation might be followed by stretching of the osteogenetic tissue.

Mr. NORTHCROFT had used intermaxillary traction to remedy displacement when teeth were absent in one fragment of the mandible. He showed a useful "open" metal splint designed to allow of easy inspection of the teeth when replacing the fragments.

Mr. NORMAN BENNETT said that he used no fixed caps or splints. He found he could not fix them on account of the cement getting washed out before it set. He used gradual methods and, where there was not much loss of bone, allowed the parts to consolidate a little before separating them.

Mr. W. W. JAMES recommended rubber tubing tied by its ends into a bow and placed inside the lips to distend cicatricial parts. Great relief might thus be given to dribbling.

Mr. PEARCE did not like Mr. Colyer's idea of extracting in cases of delayed union. He thought patience would preserve the teeth. He spoke of the wonderful reception given by French dentists to those British dentists who had visited France.

Mr. J. G. TURNER suggested that in cases in which loss of bone was not too extensive pieces of bone might be loosened from the patient's own mandible and turned into the gap while still retaining a vital periosteal connexion with the bone. Where there was small loss of bone the histories of several cases showed the possibility of regeneration of new bone if the parts were immobilized in a position such as to preserve the gap. *X* rays showed that this was effected by fragments of osteogenetic tissue scattered in the wound. When the parts had fallen together he advocated waiting a little and then stretching slowly to stretch the new-forming bone.

Among cases shown were three of bone-grafting, one by the American Ambulance of a year's standing, and two of later date—one by Sir F. Eve and Mr. J. F. Colyer, and one by Sir A. Fripp and Mr. Hopson. All seemed to be successful. In Sir A. Fripp's case 2½ in. of the rib had been inserted and a splint bridge was worn on the teeth; *x* rays showed bony union at one end at least. The exhibition was visited continuously during the two weeks it was on view. The splints alone demonstrate the need of special dental aid.

Dr. Pont's lucid type-written description of his cases was widely read. Members of the Odontological Section are unanimous in expressing their admiration of the work of their French and American colleagues, and their appreciation of the part they played in promoting a unique exhibition and discussion.

Reviews.

MORPHOLOGY AND ANTHROPOLOGY.

THE second edition of Dr. DUCKWORTH'S *Morphology and Anthropology*[1] is in course of publication in a new and greatly extended form. The first volume now before us corresponds to section A of the previous work. It deals with the anatomy of the mammals, especially of the primates, and we understand that other volumes dealing with embryology, craniometry, and palaeontology, will be published after the termination of the war. After a short introduction to the mammalia and the orders into which that group is divided by modern systematists, Dr. Duckworth passes to a full account of the primates, first reviewing the taxonomy of the group, though without referring to Dr. Elliot's rather revolutionary "Review of the Primates." He then deals at length with the external and internal anatomy of several of its members, especially a lemur, the tarsier, an old world monkey, and the gorilla. The crania and the teeth of the primates are described in the concluding chapters.

The book is written primarily for students of physical anthropology, and presumes the very special knowledge of anatomy which is only possessed by the few who have passed through the human anatomy schools. The book, in fact, is "advanced," and the ordinary zoologist will find himself once more cut off from understanding the thoughts of the anthropologist, which is to be regretted, because anthropology tends to isolation and specialization, even though it is so many-sided. All biologists will notice with pleasure Dr. Duckworth's insistence on the fact that specialized and simple types hardly exist in real life; he never lets us forget that extreme specialization in one organ is very often found in a creature which is in other respects simple, or even degenerate.

One of the most satisfactory parts of the book is that which deals with the dentition of the primates; it might interest equally a zoologist or a dentist. The origin of cusped teeth has always presented great difficulties to vertebrate morphologists, and Dr. Duckworth gives a summary, we believe the only one, of the theories which have been put forward from time to time by Cope and Osborne, Marett Tims, and others. It is very lucid, and also, we believe, very fair, but it is disappointing that more space could not have been spared for it; the author would have done well to give more definite indications as to which of all the views he himself supports, and to what extent any of them have been accepted by workers

[1] *Morphology and Anthropology.* By W. L. H. Duckworth, M.A., M.D., Sc.D. Second edition, vol. 1. Cambridge: The University Press. 1915. (Med. 8vo, pp. 318; 208 figures. 10s. 6d. net.)

among the other mammalia. The array of facts is immense; they are arranged logically, and it is well to have them in this accessible form, but some will wish that the author had embodied among them a passing word of generalization, even though his summary has yet to appear.

The illustrations, many of them from the author's own line drawings, are very clear. The indexes are unfortunately quite inadequate.

CAUSES OF VIOLENT DEATH.

In his thesis for the degree of M.D. in State Medicine at the University of London, entitled *An Inquiry into the Statistics of Deaths from Violence and Unnatural Causes in the United Kingdom*,[2] Dr. W. A. BREND has examined the official statistics in twelve blue-books and reports issued by the Home Office, the Registrars-General for England, Scotland, and Ireland, the Local Government Board, the Board of Trade, and the London County Council. He shows that the present system of collecting and recording information concerning such deaths is far from satisfactory, and that this is in part due to incoordination and differences in the system of classification, nomenclature, area covered, and other particulars as adopted by the various authorities. Particular attention is drawn to the waste of the valuable source of information which might be afforded by the records of the various coroners; they are claimed as the private property of the coroners and are not made use of except for a brief summary of verdicts issued by the Home Office and a special report on deaths from starvation published by the Local Government Board. In criticizing the figures given under the heading "Murder," as returned by the Home Office and the Registrar-General, the author calculated that it would appear as though 60 per cent. of the murders committed in this country remain undetected, but concludes that this inference is not justified in the absence of knowledge as to how far the figures include cases which are not criminal at all, according to the decisions of the higher courts. It is not clear whether these figures include cases of infanticide in which a verdict of "murder against some person or persons unknown" is returned. The number of such cases is by no means negligible. In dealing with "deaths from overlying" Dr. Brend emphasizes, perhaps too much, the importance of having the body examined after death by expert pathologists to exclude natural causes of death, but the recognition of acute capillary bronchitis, gastric disturbances leading to convulsions, pyelitis and even bronchopneumonia is certainly not always easy. Attention is drawn to the marked seasonal variation in the number of deaths from overlying and to the difference in their number in rural as compared with urban districts, amounting to nearly 40 per cent. in favour of the former in spite of the fact that the difference in overcrowding is only 11 per cent. A possible explanation, which the author does not mention, may be found in the practice which working-class parents make, especially over the week end in large cities, of taking their infants out till late at night while they do their weekly shopping. This practice would expose infants to the risk of natural disease, especially in the winter months, and though coroners do not now notice an excess of these deaths on Saturday night it is possible that many are to be attributed directly or indirectly to this habit.

Dr. Brend's thesis covers a wide range, from "murder" to "deaths under anaesthetics." It is of considerable interest, and he has certainly made out a case "for believing that in certain forms of death from violent and unnatural causes we have a field for investigation and an opportunity for saving human life which has hitherto been relatively neglected."

MENTALLY DEFECTIVE CHILDREN.

AT the present time, when as yet the powers and duties conferred on local authorities and education committees by the Mental Deficiency Act, 1913, are a matter of much consideration and the policy to be pursued of much uncertainty, *Mentally Defective Children*,[3] a translation of BINET and SIMON'S little book, is very welcome. The names of the authors have become very familiar in connexion with the scheme of tests they devised for measuring the level of intelligence, but few are acquainted with the splendid work carried out by them, and recorded in the volumes of *l'Année psychologique* and in the present book, which led up to and formed the foundation of this scheme. In Dr. DRUMMOND'S admirable translation the first origins are seen of the idea which was ultimately worked out with such thoroughness, and it was a happy idea to include as an appendix the actual tests to which the work ultimately led; the schedule of tests has been translated by Miss Margaret Drummond, who has added general directions regarding their application.

The book was specially intended as a guide to the admission of mentally deficient children to special schools or classes. The preliminary steps are to describe the mental and moral characteristics of such children, and form a theory as to their real nature. The problem is attacked partly by the method of questionnaire and partly by direct observation, and the theory on which their general conclusions are based is that the defective child does not resemble in any way a normal one whose development has been retarded or arrested, but that his specific characteristic is an unequal and imperfect development. It may surprise some of the critics, and even some of the admirers of the Scale of Intelligence Scheme, to learn, or to be reminded, that this was the view held by Binet; much that has been written about his scale has failed to recognize the purpose for which it was devised and the limited claims made by its authors. It was their dislike of empiricism and vague generalities and *a priori* conceptions that forced them to devise questions and tests, to analyse the result of their applications in different cases, and gradually to systematize their method and the information so obtained.

A chapter on the medical examination of defectives raises interesting questions, and answers them, perhaps, not quite in accordance with medical views in the past, and yet, it must be admitted, with good reasons adduced. A further chapter discusses the methods of education from the practical point of view that all instruction given to defectives should be subordinated to their mode of life. The spirit of the book and its value, whether to science or to the cause of educational and social reform, is well summed up in the concluding sentence: "The essential thing is for all the world to understand that empiricism has had its day, and that methods of scientific precision must be introduced into all educational work, to carry everywhere good sense and light."

THE AGE OF THE EARTH.

PROFESSOR JOLY'S book, *The Birth-time of the World*,[4] contains twelve essays written at various times during the last quarter of a century. Like Tyndall, the professor has been drawn to write about the Alps, and the many thoughts concerning the problems of life, time, and eternity raised in the mind of the traveller in Switzerland. As a geologist, Professor Joly sees in the Alps a writing-block for Time, and is prompted to attempt an estimate of the age of the earth from the geological data of subaërial denudation, comparing the result with other estimates based on astronomical data and the calculations of our experts in radium. The method is that employed many decades ago by proficients in other branches of physical science, notably by James Croll. Professor Joly has the advantage of fuller information, and makes a most interesting story of it all. As a mere visitor to the summer pastures of the Alps, he has been struck—as who has not?—by the richness of the flora there burgeoning, and he gives excellent photographs of his own taking to illustrate many of the points raised in these essays. Another subject that he deals with is skating, and he shows that the possibility of this method of progression depends on the lowering of the freezing point of

[2] *An Inquiry into the Statistics of Deaths from Violence and Unnatural Causes in the United Kingdom.* By W. A. Brend, M.A Camb., M.D., B.Sc.Lond., of the Inner Temple, Barrister-at-Law. London: C. Griffin and Co., Ltd. 1915. (Demy 8vo, pp. 80. 3s. 6d. net.)

[3] *Mentally Defective Children.* By A. Binet and Th. Simon, M.D. Authorized translation by W. B. Drummond, M.B., C.M., F.R.C.P.Edin. With an Appendix containing the Binet-Simon Tests of Intelligence by Margaret Drummond, M.A., and an Introduction by Professor A. Darroch. London: E. Arnold. 1914. (Cr. 8vo, pp. 189; 13 figures. 2s. 6d. net.)

[4] *The Birth-time of the World, and other Scientific Essays.* By J. Joly, M.A., Sc.D., F.R.S. London: T. Fisher Unwin, Limited. 1915. (Med. 8vo, pp. 321; 38 plates. 10s. 6d. net.)

water by pressure; with the result that it may truly be said that the skater skates on water, not on ice. Other essays are entitled "Other Minds than Ours?" a discussion on the alleged inhabitation of Mars; "The Latent Image," an address to photographers; "Pleochroic Halos" and their connexion with radio-activity, a matter for crystallographers and mineralogists; "The Use of Radium in Medicine," a lecture to post-graduate students of medicine at the founding of the Dublin Radium Institute last year; the last essay in the book is "A Speculation as to a Prematerial Universe," a metaphysical exposition. Professor Joly writes in an interesting manner, and we may commend his volume to general readers with the assurance that they will find in it something to arrest their attention.

NOTES ON BOOKS.

Appleton's Medical Dictionary,[5] a new work with an editor, an assistant editor, and seven special contributing editors, is designed for the use of medical men. It has an appendix with notes on the preparation of pathological specimens, diets, certificates of births and deaths, reciprocity among the North American States, and cases of poisoning. The book is clearly printed, but contains numerous misprints, particularly in the chemical formulae it gives. Certain terms of little utility are given, such as "Kupiology, the pathology of malignant ulcers," and "Hematoncus, a name for several varieties of angioma." Certain common terms are absent, such as "streptotrichosis," "emunctory," "proteid." The chemical term "aryl" is inserted, while "acyl," an equally common term, is omitted. "Pituitrin" is misspelt "pituitin." "Erlenmeyer" is set down on p. 894 as "Ehrlenmeyer." Throughout the dictionary American spelling is employed. Medical men nowadays are already supplied with an abundance of excellent medical dictionaries, each with some special excellence in its own department. Gould's *Illustrated Dictionary of Medicine* is very large and complete, and his *Pocket Medical Dictionary* is small and complete. Dorland's two *Medical Dictionaries*—the larger illustrated, the smaller of pocket size—are both very compact and full. Hoblyn's *Dictionary of Terms used in Medicine* is familiar to medical men of many generations in this country. It would appear, therefore, that a new medical dictionary must force its way upon a rather crowded stage, and, unless of exceptional merit, can hardly expect to find a leading part unapportioned.

The eighth edition of DORLAND'S *Illustrated Medical Dictionary*[6] follows two years after the appearance of the seventh edition. The text has increased by thirty pages; nine of these are occupied by new clinical and laboratory tests. So far as the point can be determined by a cursory examination, Dr. Dorland seems to have brought the dictionary well up to date, and to have done his work well. The book will be found very useful by students and practitioners of medicine. As is perhaps natural, the illustrations are the least satisfactory part of the book.

As a book of comfort for those whose relatives have fallen in the present war, Dr. C. WILLIAMS has written a little study[7] in biblical eschatology in which the views of the primitive church on death and the hereafter are stoutly reaffirmed. Dr. Williams holds that after death the soul may go to Paradise, to Hades, or to Gehenna, according as it is good, indifferent, or bad. Dr. Williams looks forward with confidence to the coming of the millennium, and claims a real efficacy for prayers for the dead. His book may be recommended as a firm declaration of faith to those who find consolation in speculations on the unknown future that lies before the dying.

The *Minutes of the General Medical Council* and of its various committees for the year 1915, with nineteen appendices,[8] has been published, and forms a volume of 521 pages. The *General Index to the Minutes of the General Medical Council* for 1903–1915[8] has also been issued.

[5] *Appleton's Medical Dictionary.* Edited by Smith Ely Jelliffe, A.M., M.D., Ph.D., assisted by C. W. Latimer, M.D., A.M. London and New York: D. Appleton and Co. 1916. (Demy 8vo, pp. 945. 15s. net.)

[6] *The Illustrated Medical Dictionary.* By W. A. Newman Dorland, A.M., M.D., F.A.C.S.; eighth edition, revised and enlarged, London and Philadelphia: W. B. Saunders Co. 1915. (Med. 8vo. pp. 1137, illustrated. 19s. net; with thumb index, 21s. net.)

[7] *Death and Hereafter.* By Dr. C. Williams. London: Jarrold and Sons. 1915. (Cr. 8vo, pp 94. 1s. net.)

[8] London: Constable and Co. 1916. Prices 12s. and 2s. 6d. respectively.

ROYAL MEDICAL BENEVOLENT FUND.

At the meeting of the Committee on January 11th twenty cases were considered, and £149 10s. voted to fifteen of the applicants. The following is a summary of the cases relieved:

Widow, aged 56, of M.D. Aberd. who practised at Balham and died in 1904. After husband's death went to South Africa with her son, and invested all her capital in a mine which was a failure. Applicant returned to England at the outbreak of war. Son joined the army in South Africa, and the little allowance he was able to make to his mother ceased. She has earned a little by nursing but not sufficient to keep her. Relieved once, £10. Voted £5 and referred to the Guild.

Widow, aged 42, of M.R.C.S.Eng. who practised in London. Has three young children. Has endeavoured to make a living by running a boarding house, but, owing to ill health and the children, has found it very difficult, and requires a little temporary help. Voted £10.

Wife, aged 39, of a professional man who had joined the army. Applicant's first husband was a medical man, and she had three daughters by him. She has developed tuberculosis, and had to go into a sanatorium, and wanted a little help to complete the education of her youngest daughter, aged 16. Another society has promised a little help; £2 10s. was granted to the Guild, who were also going to assist.

Daughter, aged 49, of M.D.Lond. who practised in London and died in 1900. Was left practically unprovided for, and is very delicate. Only income £19 per annum. For many years lived with a friend who has recently died. Relieved twice, £25. Voted £15 in twelve instalments.

Daughter, aged 63, of M.R.C.S.Eng. who practised in Watford and died in 1879. Applicant unable to work in consequence of impaired health. Only income a pension of £26 from another society. Relieved nine times, £108. Voted £9 in twelve instalments.

Daughter, aged 51, of M.R.C.S.Eng. who practised at St. Clears and died in 1878. Applicant has double curvature of the spine. Lives with her mother, who is an annuitant of the Fund. Relieved twice, £12. Voted £6 in twelve instalments.

Widow, aged 63, of M.R.C.S.Eng. who practised in London and Somerset and died in 1901. Applicant was left quite unprovided for at husband's death. Has managed to earn a little by dressmaking and letting rooms, but has been ill, and recently underwent an operation for uterine fibroids. Relieved twice, £24. Voted £12 in twelve instalments.

Widow, aged 65, of L.S.A.Lond. who practised in London and died in 1890. Applicant has no permanent income, but earns a little by needlework and taking in boarders. Her health is very precarious. Relieved three times, £36. Voted £12 in twelve instalments.

Widow, aged 59, of M.R.C.S.Eng. who acted as locumtenent and died in 1913. Applicant was practically supported by eldest son, who gave up a good position and joined the army, but has been missing since September last. Other son also in army, but only able to allow his mother the usual army allowance. Too old and health not good enough to enable applicant to work. Relieved twice, £20. Voted £12 in twelve instalments.

Widow, aged 51, of M.R.C.S.Eng. who practised in Leicestershire and died in 1902. Applicant was the Morgan annuitant of the Fund for some years. Owing to three sons having joined the army and navy, and not able to make the usual allowances towards the upkeep of the home, and one daughter very ill, applicant has got into temporary difficulties. Voted £5.

Wife, aged 49, of L.R.C.P.Irel. Separated from her husband owing to his habits. Left with three children, the youngest of whom is at Epsom College, and the others hope to be able to earn a little soon and help their mother. Applicant's eyes are bad, and she is quite unable to work. Relieved three times, £36. Voted £12 in twelve instalments.

Widow, aged 59, of L.R.C.P.Irel. who practised at Chester and died in 1907. Applicant was left quite unprovided for; only certain income a pension from another society of £25. Health very unsatisfactory. Has one daughter who is married and unable to help. Relieved eight times, £96. Voted £12 in twelve instalments.

Daughter, aged 61, of M.R.C.S.Eng. who practised at Huntspill and died in 1889. Applicant has tried to make a living by letting rooms, but not successfully, and all her capital has been lost in consequence. Only income now a little from needlework. Relieved five times, £60. Voted £12 in twelve instalments.

Daughter, aged 45, of M.D.Heid., L.R.C.P.Lond., who practised in London and died in 1890. Applicant's health is very unsatisfactory. She earns a little by painting, but this is very precarious, especially at present. Relieved once, £12. Voted £10 in two instalments.

Widow, aged 70, of M.R.C.S.Eng. who practised at Maidstone and died in 1910. Applicant was left totally unprovided for and has tried to earn a living by taking in paying guests, but recently has not been very successful, and is too old to try other work. Relieved five times, £42. Voted £12 in twelve instalments.

Subscriptions may be sent to the honorary treasurer, Dr. Samuel West, 11, Chandos Street, Cavendish Square, London, W.

The Royal Medical Benevolent Fund Guild appeals for

gifts of secondhand clothing, boots and shoes in good condition, also household linen. The gifts should be sent to the Secretary, Royal Medical Benevolent Fund Guild, 43, Bolsover Street, W.

MOTOR NOTES FOR MEDICAL MEN.

By H. MASSAC BUIST.

The Petrol Situation.

The petrol situation is becoming somewhat aggravated. The first hint received by the public was the circular of the Asiatic Petroleum Company referring to a possible shortage, which in turn brought forth a statement from the Anglo-American Oil Company that there was no shortage, but that such statements were likely to send up prices. The situation thus revealed remained an enigma to the public, particularly when, about a fortnight later, all the petrol companies save the Asiatic Petroleum Company (Shell and Crown brands), advanced the price of their fuels approximately 4d. a gallon. Then the Shell people issued a circular again insisting on the need of economy, also claiming that they were supplying four-fifths of the fuel required by the British forces, and concluding with the announcement that in consequence they would make it their best endeavour to supply the public with one-third of its normal peace time consumption of Shell and Crown spirits.

If pleasure motoring were the only thing to be considered, one-third of peace-time supplies would more than suffice for all the driving that is done nowadays. But altogether apart from the enormous demands for motor fuel for the navy and army, alike at home and overseas, our home consumption of petrol for civilian use is unprecedentedly high, primarily because the wholesale commandeering of horses for war service has compelled the community to take to the employment of utility motor vehicles to an extent that has never obtained before. As regards consumption as reflected by the shipping accommodation problem, for a given amount of work done the utility motor vehicle consumes appreciably less than half the tonnage it is necessary to import in the way of foodstuffs for horses doing the same amount of work, so there is a direct gain under that head.

Rising Fuel Prices and Shipping Rates in America.

But against this the Government has had to take over approximately half the fleets of tank steamers possessed by the fuel companies, and may have to take more yet, so that there is a real shortage of shipping accommodation for the motor fuel supplies of the civilian community. In wide terms, the tank steamer building for the year will add approximately a third to the world's fleets; but that will barely keep pace with the growing demands under all heads for motor fuel before an allowance of any sort is made for possible losses of tank ships due to enemy enterprise. It therefore follows that in the present situation a very sharp look-out has to be kept on the activities of those oil refiners in various parts of the world who own tank steamers; the bidding for their services for a voyage is very high in consequence. As giving a notion of the extraordinary state in which the freight market is in this connexion I may point out that within the last month I have seen contracts placed ranging from £3 15s. to no less than £6 10s. a ton for petrol to be brought here from America. Both rates are, of course, quite abnormal. Yet the lower figure is the lowest at which business has been done.

Nor is this all; for when the use of a single steamer is secured to bring a cargo of oil here it is, of course, always a condition that the fuel shipped is purchased from the refiner owning the given steamer. For example, not all the petrol imported by the Anglo-American Oil Company comes through the Rockefeller groups. Supplies are purchased from about four separate and independent sources.

Despite the fact that in 1915 and in 1916 there will be added to the motor vehicles in use in the United States alone a total of two million machines—over 800,000 were added last year, and over a million will be added this year—it is a fact that all the petrol we need is obtainable in the world. Put in few words, the situation is simply this: We can get all the fuel we need and are able to transport, but that fuel is worth just as much as it will fetch on the open market, and we must pay accordingly. In face of the figures I have given concerning the rate at which America is increasing her use of motor vehicles, naturally the oil refiners are not throwing their stocks on the market, but instead wait for bids. They know that they can dispose of all their stocks at home. On the other hand, they have such an enormous foreign demand that the price of home consumption has risen from 15 cents per American gallon in New York a year ago to 35½ cents to-day, and 40 and 50 cent petrol is being spoken of. We have to add one-fifth to every American gallon to make an English one of it, apart from which most of this 35½ cent petrol is equal to only about our third-grade spirit, therefore it has to be refined again when brought over here, which further reduces the quantity.

Why Tales of Shortage Do Harm.

The importers claim that the rise of 4d. a gallon barely takes up the advance that has occurred during the last twelve months in the cost of the fuel in the primary markets where they purchase it, and makes no allowance whatever for the current abnormal shipping rates and for the heavier distribution costs in this country. Those costs embrace the two gallon tins in which the petrol is kept and of which there is a great shortage, owing, first, to the heavy demands and destruction in connexion with those supplied for war service in the early days of the campaign, and, secondly, to a section of the motoring community having laid up large fuel stores in two gallon tins, which are accordingly out of circulation for an unduly long time. The authorities solved their own tin problem by taking two steps. The first consisted of organizing adequate repair dépôts so that the wholesale scrapping of tins was stopped, and the second was the taking over of the supplies of tin and the tin works, so that for some time past the Government has been making its own petrol cans. In consequence the petrol importers have had to import their tins, which is comparatively a very expensive process.

In face of all these points, therefore, the only marvel is that the civilian community has come thus far through the war without having to pay more than half a crown a gallon for its first-grade motor fuel, particularly as in France considerably more has had to be paid. It will be appreciated that nothing could more adversely influence this matter from our point of view than putting abroad stories concerning shortage of petrol, since the refiners in America are only waiting for such information to hold back their supplies until they can demand still more extortionate prices. In this connexion it must not be forgotten that in the United States they have very very full knowledge of the manner in which munition producers there have coined money out of this war, some large orders having paid not only for the cost of production and materials, but also for the factory buildings in which and for the machinery with which they have been produced; and have, besides, left over a balance of 25 per cent. profit on a single order. With the example of successful plundering on such a scale it is not surprising that sundry oil refiners in the New World consider their present game not only absolutely legitimate, but also positively philanthropic by comparison.

"Tin-Grabbers" Aggravate the Difficulty.

The "tin-grabbers," as the petrol trade describe those members of the community who have aggravated the position at home by laying in stores of petrol sufficient for anything from six to eighteen months and with a view to dodging increases of import duty, should become objects of special attention on the part of the authorities now that the motor fuel situation is having to be dealt with by the Ministry of Munitions. Such individuals have acted against the public interest; therefore their stocks should be seized, if only for the reason that every user of motor fuel should pay duty on it at whatever rate obtains for his given class at whatever time he uses that fuel. In Germany laying up stores of this kind, which are estimated by the Royal Automobile Club to total over a million cans, would be punishable by heavy fine, for with the total number of cans in the country enormously diminished by reason of the army's needs at the beginning

of the war, the having an additional million withdrawn from use by these undesirable tactics of comparatively a small section of motor users becomes a very serious thing to the community. Every additional can has to be imported into these islands, consequently each one should be made the vehicle of distributing two gallons of petrol as frequently as possible in place of containing the same two gallons of petrol for month after month. This is one of the first points that should be made by the medical profession when making a move, as it must do, to have its case specially considered by the authorities at the present juncture.

Medical Men must be Assured of Supplies.

Next it should bring out the need for supplies of petrol being assured to medical men throughout these islands according to their several needs. The Commercial Motor Users' Association, which claims that more than 75 per cent. of the petrol used by the civilian community of these islands is required by the industrial and commercial motor vehicle users, has been invited by the Ministry of Munitions to submit a scheme to secure a more efficient distrition of petrol. The fact is overlooked that of the balance of less than 25 per cent. used by the civilian community at the moment by far the greatest proportion is needed for professional uses, foremost among which are doctors. Motors are besides needed by veterinary surgeons, surveyors, civil engineers, and all manner of other professional men, whose collective requirements nevertheless do not come within the scope of the Commercial Motor Users' Association's claims.

The Motor Trades' Association did well in advertising the limit which motorists ought to pay for their petrol supplies in England, Scotland, Wales, and Ireland at the present time. But the association is, of course, unable to compel local retailers who desire either to favour certain customers or to hold up supplies to release what stocks they may have in hand. To put the retailing of petrol into the hands of the Government by any sort of machinery that could be devised would only be adding expense to expense and creating a number of paid posts for officials, which form of national extravagance must be stopped at all costs, now we have gone thus far in the war and all realize that every penny must be looked at twice before it is spent.

Of course, the main causes of the, at present, admittedly unequal distribution of petrol are unavoidable. They arise from certain consignments intended for civilian use being diverted at the last moment to some point or other where the Government desires them to be placed for its own disposal for military purposes, whereby a month or two may pass before it is possible to arrange for another cargo to be brought to the given centre. This difficulty could be obviated as far as medical men are concerned, however, by arranging that each shall be allowed to accumulate anything from, say, two to four dozen tins, according to his situation, whereby it would be possible to carry on for a matter of weeks in the event of any temporary interruption in local distributing arrangements.

The Chile Minister of Justice has appointed a Commission for the study of crime. A laboratory of experimental pathology is to be established at Santiago.

It appears from a report by the Medical Officer of Health of Vienna, Dr. Böhm, that during the first twelve months of the war the health of Vienna was in many respects better than might have been expected. The number of patients treated in public and private hospitals was 79,169, as compared with 119,935 for the preceding twelve months. Many men had left the town on active service, and the conditions of labour and pay were much improved for those who stayed at home. The death-rate was 14.5 per 1,000, as compared with 13.6 per 1,000 for the last twelve months of peace. Of the infectious diseases commonly associated with warfare, only small-pox assumed alarming proportions; and for this the lack of universal vaccination was to blame. In the first twelve months of the war 1,613 cases were notified in Vienna, 1,538 in the civilian population, 50 among soldiers, and 25 among civilians not domiciled in Vienna. There were 351 deaths, and the mortality was, therefore, 21.7 per cent. Only a few cases of cholera, typhus and dysentery occurred, and the incidence of typhoid fever among the civil population was nearly normal.

THE REPORT OF THE ROYAL COMMISSION ON VENEREAL DISEASES.*

(Continued from p. 346.)

II. Prevalence (*continued*).

Distribution of Venereal Disease.

The crude death-rates from syphilis per million for the year 1910 are stated to be 46 for England and Wales, 42 for Scotland, and 22 for Ireland. Such consequential diseases as general paralysis, locomotor ataxia, and aneurysm follow syphilis closely in relative order of distribution, except that aneurysm stands highest in Scotland, and, together with general paralysis, is markedly low in Ireland. The table brings out the fact that syphilis is essentially a town disease. It is concluded that the excess of urban mortality from syphilis is due largely, but not altogether, to the high proportion of institutional deaths returned by them. For gonorrhœa no similar statistics are available, but the trend of the evidence is to show that, like syphilis, it is essentially a town disease.

The infantile mortality returns due to syphilis again show the striking immunity of the rural areas: it is one-half that in urban areas. The mortality of illegitimate infants is from 8 to 10 times as high as that of the legitimate.

A most striking table gives the recorded death-rate per million for syphilis and three consequential diseases in classified groups of the population above 15 years of age. The rate is heaviest for unskilled labour; next in heaviest incidence comes the upper and middle class which includes clerks and insurance agents; then follow in order skilled labour, textile workers, miners; and last, with the lightest incidence, agricultural labourers. "As the figures were standardized to allow for the varying age distribution among classes whose average duration of life differs, they may be accepted as correctly representing the relative incidence within the limits of accuracy permitted by the present system of registration. . . . Viewing these figures as a whole, we consider that there are good grounds for believing that the prevalence of syphilis is greatest amongst the highest and lowest of the social classes. . . . Incidentally the figures help to confirm and explain the geographical distribution with which we have dealt."

Defects in Registration.

The report comments on the bad system of death registration in the United Kingdom; not only does the publicity of the certificate reduce its possible value, but there is no uniform method, and no provision for collating and analysing the returns as a whole. In England and Wales the doctor gives the certificate to the friends of the deceased, in Scotland he is supposed to send it to the registrar, but it is not confidential and a copy may be got for a small fee. In 1893 a Select Committee of the House of Commons commented on this unsatisfactory state of affairs, and "recommended that medical practitioners should be required to send certificates of the causes of death to the registrar, instead of handing them to representatives of the deceased." No official action has been taken, and bills presented by private members made no progress. But none of these attempts laid stress on the necessity for the document being confidential. The report points out that under a proper system "this certificate would be confidential, and access to it would only be possible on the order of a court of justice. A number of witnesses gave evidence in favour of confidential certification of the cause of death, and we understand that a reform of this kind has for some years been advocated by the British Medical Association, and is generally supported by the medical societies." Strangely enough, the view of the life assurance societies, so far as it was expressed, was opposed to confidential registration. But the Commissioners state: "We are not convinced by the alleged objections, and we consider that any improvement in the accuracy of vital statistics must, in the long run, benefit the life insurance companies, who could adopt their methods to the system of confidential certification as in all other great European countries." The Commission recommends that the Notification of Births Act should be made universally operative, and this has been done. It

*Royal Commission on Venereal Diseases. Final Report of the Commissioners. [Cd. 8189.] Price 1s. 11d.

also recommends that stillbirths of an earlier period than the Act specifies should be notifiable.

Defects of Hospital Statistics.

Stringent comment is made on the lack of information furnished in response to the appeal to the voluntary hospitals; 285 were applied to and only 67 replies were received.

Although in a few cases much trouble was taken in filling up the forms, the figures obtained are, for various reasons, unsuitable for our purpose, and there can be little doubt that in a large number of hospitals adequate records for statistical purposes are not kept. It appears to us to be highly unsatisfactory that these institutions, which are maintained from funds of a semi-public nature, should be unable to furnish precise information respecting the diseases with which they deal, and we trust that this important question will receive the serious consideration of the managing bodies.

The next paragraph of the report deals with the response of the Poor Law unions, and it would appear that their returns were of even less use than those of the voluntary hospitals.

We are strongly of opinion that improved records of sickness in hospitals and Poor Law institutions are urgently needed, and we consider that the Local Government Board should devise a uniform system with the object of securing statistical information as regards the prevalence of disease among persons who receive institutional treatment.

III. EFFECTS OF VENEREAL DISEASE.

The section on the effects of venereal disease is an admirably written clinical essay. Syphilis and gonorrhoea are dealt with. The early and late effects of these diseases, arterial disease of syphilitic origin, syphilitic diseases of the nervous system, and the grave risks of blindness, and also the fact that syphilis predisposes to cancer of the tongue, are commented on, as is the importance of gonorrhoea in women, not only because of the suffering entailed, but since it is said to be the commonest cause both of absolute and relative sterility—"in women probably 50 per cent. of all causes." "Knowledge of these facts should, in our opinion, cause both the medical profession and the public to take a far more serious view of gonorrhoea than has hitherto been adopted." The effects of gonorrhoea on little girls are noted, both when the disease arises from accidental causes and by attempts at sexual intercourse, "sometimes attributable to the abominable superstition that intercourse with a virgin cures venereal disease in a man."

Effects of Venereal Disease on Offspring.

"We have received much evidence showing that both in the fetus and in the child after birth hereditary syphilis is an even more serious disease than the acquired form." It is a frequent cause of antenatal death, producing abortion, miscarriage, or stillbirth. "It will be seen that the figures furnished by one witness, which relate to 150 (syphilitic) families, show that out of 1,001 pregnancies 172 resulted in miscarriages or stillbirths."

The gravity of the diseases set up in the child in the earlier and later periods of its growing life by the virus are commented on. "Of 1,100 children in London blind schools, Mr. Bishop Harman states that 31.2 per cent. of cases were certainly, and in addition 2.8 per cent. probably, due to syphilis." Again, "Of 845 children suffering from some acquired deafness in London County Council deaf schools, 7.21 per cent. were adjudged to be congenital syphilitic." Ophthalmia neonatorum as a cause of blindness is nearly as grievous. The London blind schools figures showed that 24.35 per cent. of children were in the blind schools from this cause, and for a small group in the Bristol school 41 per cent.

As to the relation between alcohol and venereal disease, the Committee says that alcohol "renders a man liable to yield to temptation which he might otherwise resist, and aggravates the disease by diminishing the resistance of the individual." It makes latent disease active, and renders a case more refractory to treatment.

Economic Effects of Venereal Disease.

Fetal and infantile death and sterility in women and in men due to venereal disease are a heavy toll on the vitality of the nation. Disease renders the living of little economic value. The London figures of the blind referred to show that—

The total percentage attributable to venereal disease was certainly 55.6, and may have been as large as 58.4. To the expenditure incurred in the treatment of these children must be added the additional cost of their education. . . . The figures published by the London County Council indicate that the total cost of educating a child in the day schools for the blind is about seven times the cost of the education of the ordinary child. . . . Dr. Kerr Love stated that the cost of educating a deaf child is ten times as great as in the case of a normal child.

To these add "imbecility, idiocy, and various . . . other diseases, . . . the total . . . cannot be estimated."

Among adults the loss of working power from the earlier effects of the disease is important. "The naval statistics for the year 1912 show for an average strength of 119,510 men a total number of 269,210 days lost as a result of venereal diseases; in the army at home during the same year . . . with a strength of 107,582 men . . . a loss of 216,445 days. . . . If corresponding figures from the civil population could be obtained they would be found to be extremely large," especially when the deficient provision for treatment is considered.

The loss due to late effects is equally grave. "The statistics of the London County Council asylums show that 8 per cent. of the total admissions, or 15 per cent. of the male and 3 per cent. of the female admissions, are due to cases of general paralysis of the insane." The cost of all the lunatics in these asylums is £600,000 a year. It is estimated the total cost of asylum treatment in England and Wales from syphilis alone is £150,000 a year; "it cannot be less, and may be much more."

IV. MEANS OF TREATING OR PREVENTING DISEASE.

This is the final and naturally the most important section of the report, for it contains the recommendations of the Commissioners.

Diagnosis.

At the outset they insist on the necessity for early and accurate diagnosis.

Early correct diagnosis is the basis of early satisfactory treatment, cure, and prevention of the disease. Much can be accomplished in the prevention of venereal disease by education, and by arousing the public conscience to the great dangers, both to the individual and the community, of the neglect of infected individuals to seek competent medical advice as early as possible; this is particularly important in cases in which the existence of infection is doubtful or where the symptoms and signs are liable to be disregarded on account of their mild character and the absence of pain or discomfort. Every inducement should be offered, and no social, economic or administrative disabilities should prevent any sufferer with a venereal disease, however slight, from obtaining an accurate diagnosis with a view to satisfactory treatment at as early a date as possible after infection.

Comment is made on the advantages to be derived from the extended use of laboratory methods of diagnosis and the necessity for uniformity in the methods adopted. "The general practitioner will not as a rule have facilities for carrying out these tests for himself. He can, however, readily collect the material necessary for examination by either method and send it by post to the pathological laboratory. The presence of the spirochaete in a discharge can be shown several days after collection."

Treatment of Syphilis.

With regard to the results of treatment of syphilis, the report contains the following passages:

The only certain proof of eradication is reinfection. Since the introduction of the modern diagnosis and treatment many cases of reinfection have been reported. Syphilis may therefore be regarded as a curable disease. It cannot be too widely proclaimed that no grave disease responds more readily to efficient medical treatment than syphilis, and there are good grounds for concluding that eradication of the spirochaete with complete cure, or a total absence of any subsequent signs or symptoms of the disease in the majority of cases, can be obtained by "intensive treatment" when commenced in the primary stage.

There follows an excellent summary of the results of mercurial treatment, the use of arsenical compounds, the preparation by an English firm of substitutes for salvarsan and their testing by the Medical Research Committee. The reports on kharsivan and novoarsenobenzol are excellent, and there is conclusive evidence that in these thoroughly reliable and efficient preparations have been obtained. Galyl is also well spoken of.

The combined arsenic and mercury treatment (intensive treatment) introduced by Neisser is most recommended for general adoption.

This consists of periodic intravenous injections of salvarsan, followed by a course of five intramuscular injections of an insoluble mercurial preparation (calomel cream or grey oil) or a course of 30 inunctions. This is recognized by most experienced authorities as by far the most satisfactory method of treatment, and if commenced in the primary or even early secondary stage and continued for a sufficient length of time it will, in the majority of cases, result in a complete absence of symptoms, with the permanent absence or disappearance of the Wassermann reaction.

The opinion is expressed that in all cases success must largely depend upon the intelligent and loyal co-operation of the patient, and no means to ensure early and adequate length of efficient treatment should be neglected. Ignorance regarding the infectivity of the disease is largely responsible for its spread among the poorer classes, and patients should be warned of the danger of infecting innocent persons, and especially women, by whom the disease may be transmitted to their offspring. This vitally important object may, the Commissioners consider, be secured by issuing to every patient suffering with syphilis a card of instructions in some such form as the following:

Instructions to Patients.

1. Syphilis is a contagious disease; it can be cured if promptly treated by a doctor.
2. Treatment by quacks, herbalists, or persons advertising so-called cures is likely to lead to disastrous results.
3. The infection may last several years. It can be conveyed to others by sexual intercourse, by kissing, or by using the same eating or drinking vessel, utensils, or tobacco pipes, etc.
4. Treatment should not be stopped until the doctor says this may safely be done.
5. Should signs or symptoms of the disease appear, such as a rash on the skin, sore throat, or symptoms of nervous disease, a doctor should be at once consulted.
6. A doctor should be consulted occasionally, even though there are no symptoms of a return of the disease.
7. Treatment need not as a rule interfere with work or necessitate stay in hospital.
8. No one who has, or has had, syphilis should marry without permission of the doctor; otherwise there is great danger of giving the disease to wife and children.
9. Teeth should be cleaned night and morning. The patient should dress warmly, live simply, and avoid wine, beer, spirits, and other intoxicants.

The Commissioners strongly express the opinion that "the moral obligation should be urged upon all doctors who treat the disease in institutions or privately, to hand these cards, which should be provided at the public expense, to their patients."

The Treatment of Gonorrhoea.

Early recognition and prompt measures to prevent the spread of the organism to the posterior parts of the infected urethra of the male is insisted upon. The use of suitable injections, for which several colloidal preparations of silver are mentioned, is a striking advance on the old-time palliative measures and internal medication. As in the case of syphilis, the Commissioners recommend that cards of instruction, to be handed to patients suffering from gonorrhoea, should be provided at the public expense, and suggest that these instructions should be in the following or similar form:

Instructions to Patients.

1. Gonorrhoea is a contagious disease contracted through sexual intercourse. Gonorrhoea may be attended by grave consequences, especially if treatment be neglected and the necessary precautions are not taken.
2. Treatment by quacks, herbalists, or advertisers is likely to lead to disastrous results.
3. Sexual intercourse must on no account be indulged in while there is any discharge, even though this may be only slight. If this rule be neglected the condition is made worse. Moreover, there is always danger of communicating the disease.
4. Gleet, a late form of gonorrhoea, associated with a slight chronic discharge, is very likely to communicate the disease to the wife, causing much suffering and sometimes leading to chronic invalidism and barrenness.
5. Care must be taken that the discharge is not conveyed to the eyes. Neglect on this point may lead to injury to eyesight or to blindness.
6. Large quantities of simple fluids should be drunk, but no wine, beer, spirits, or other intoxicants should be taken while the discharge continues and for some considerable time after it has stopped.

The particular necessity for prompt measures in the case of women is insisted upon, as is the difficulty of the situation owing to the failure of patients to recognize the onset of disease from their confounding it with an ordinary leucorrhoea.

Existing Facilities for Diagnosis and Treatment and their Deficiencies.

In private practice facilities are increasing for diagnosis among the well-to-do and the knowledge of their advantages is spreading. Amongst the wage-earning and other less well-to-do classes the skilled pathologist is unavailable except for the scanty aid given by a few sanitary authorities and voluntary hospitals. "The lack of facilities for diagnosis undoubtedly accounts for the large amount of venereal disease, and particularly syphilis, which, not being recognized at an early stage, is inadequately treated or entirely neglected."

In Poor Law practice and that under the Insurance Acts "pathological aids to diagnosis have only been utilized to an inconsiderable extent." In voluntary hospitals the position is more advanced: "There is evidence that the provision of clinical laboratories available for aiding the diagnosis of gonorrhoea and syphilis has materially increased." Of public health authorities, it is written: "In the majority of sanitary areas in this country no official pathological facilities for the diagnosis of gonorrhoea and syphilis have hitherto been provided. . . . In the navy and army the facilities are better developed than in the rest of the community." In prisons "there are no adequate arrangements."

The facilities for treatment follow very much the same lines. "People of the middle and upper classes are treated almost exclusively by private practitioners or by consultants, except in the numerous instances in which, from shame or because they are misguided by advertisement or misleading recommendations, they consult chemists or unqualified persons." It is asserted that the training of medical students with regard to the diseases is insufficient, so that medical men do not always regard them with enough seriousness.

Under the Insurance Act, which covers roughly one-third of the total population of the United Kingdom, "an insured person suffering from gonorrhoea or syphilis is entitled to receive medical attendance and treatment, and to be supplied with the necessary medicine and appliances, exactly in the same way and to the same extent as for other diseases." But the patients are otherwise penalized. The model rule of the Insurance Commission is:

No members shall be qualified for sickness or disablement benefit in respect of injury or disease caused by his own misconduct; but no member may be suspended from benefit for a period exceeding twelve months.

The Commission reports that "The application of any such rule in the case of venereal diseases is likely to deter patients from seeking prompt and efficient treatment. It is therefore contrary to the interests both of public health and economy."

The possibility of the general use of salvarsan in private work is considered; the views of witnesses differed. The conclusion in the report is: "We are strongly of opinion that training in technique is necessary in the case of all medical practitioners who administer this drug, and the means will become available if our recommendations are adopted."

In voluntary hospitals the accommodation for treatment is altogether insufficient.

Patients apparently recognize that the treatment of venereal disease is not encouraged in general hospitals. . . . In some hospitals it is contrary to their statutes to admit venereal disease into the institution.

There is evidence that considerable objection to the treatment of venereal disease in the voluntary hospitals persists in the minds of some of the subscribers to these hospitals.

It appears that, although there is a certain amount of modern treatment available for venereal patients at special hospitals, the amount is limited, and that the workhouses and their infirmaries do not at present to any extent supply the lack. Special hospitals have done excellent work, but these are few in number.

Recommendations for Improving Facilities for Diagnosis.

Prior to the outbreak of the war the House of Commons voted £50,000 to assist in the provision of laboratory facilities "with a view to the prevention, diagnosis, and treatment of disease in general." This was intended to be

a grant in aid of the provision of pathological laboratories by the large public health authorities. "If these proposals are made effective much expenditure, which must otherwise be provided elsewhere for the treatment of venereal disease, will be saved." Where adequate facilities already exist in universities and large hospitals these should be made use of.

They "would form satisfactory centres for diagnosis; they would, moreover, have the advantage of being intimately associated with the clinic and treatment. Similarly, the services of the London Lock Hospital, which has done useful diagnostic work in the past, should be fully utilized." The recognition of the importance of a pathological laboratory to the efficiency of a hospital should receive every encouragement, and those borough and county hospitals which are of sufficient size and importance to equip and maintain a pathological laboratory with an efficient salaried pathologist should (after approval by the Local Government Board) be admitted as centres for a county or district.

Recommendations for Improving Facilities for Treatment.

Its review of the present conditions has made it clear to the Royal Commission that, except in the case of the navy and army, the existing facilities for the treatment of venereal diseases are extremely deficient.

The medical practitioners of this country are, from the nature of the case, to a large extent unfamiliar with the newer methods of diagnosis and treatment. . . . The institutional provision which has been made for the treatment of the diseases is . . . wholly inadequate.

It was the general opinion of the witnesses who appeared before us that no adequate system of treatment would be organized unless responsibility for the measures to be adopted were undertaken by the State. In these opinions we concur. We recognize that the medical practitioners of the country must form the first line of defence against these diseases, but the diseases are so widespread and their consequences are, as we have shown, so serious, not only to the individual but also to the race, that concerted action by a public authority is in our view essential.

The recommendation is that the councils of the larger local authorities should undertake definite schemes for the treatment of venereal diseases in their areas. The institutional treatment to be provided should be available for the whole community and should be so organized that persons affected by the disease will have no hesitation in taking advantage of the facilities for treatment which are offered. The Commissioners find that special centres are undesirable, and consider that "the most practicable method is the use of special wards in the general hospitals of the country, together with special arrangements, including evening clinics which are essential to the working classes, at these hospitals for the out-patient treatment of the disease," and continue:

> "We are satisfied that the existing hospital facilities, with such extensions as may be found necessary, should suffice to meet the need for the prompt and satisfactory hospital treatment of most of the venereal disease in this country."
>
> "The condition that the institutional treatment should be available for the whole community is one to which we attach cardinal importance . . . to ensure the application of patients for treatment at the outset of the disease, and to maintain continued attendance until the doctor certifies that the patient is free from infection." If a patient can afford to pay for treatment he should be referred to his own doctor, nevertheless "if the patient be unwilling, there should, in our opinion, be no refusal to treat him at the institution." "The treatment at a particular institution should not be confined to those living within a certain area."
>
> "It is essential that medical students and practitioners should have access to the treatment of these diseases at any institution dealing with venereal diseases as part of a local authorities scheme. This is of the greatest importance from the educational point of view. It is also essential that the co-operation of the practitioners with the local authority and the hospital should be obtained. We consider that any scheme of administration for dealing with venereal diseases must be framed so as to develop the ability of the general practitioners in treating these diseases, and make them more efficient for their general functions as the first line of defence of the community."

It is pointed out that at present "the Local Government Board have power under the Public Health Act to authorize the supply of salvarsan or its substitutes free to medical practitioners, and we consider that great advantage would result from the exercise of this power."

Notification of Venereal Disease.

On this head the report says that "in enforcing the notification of any disease the community has in view primarily the taking measures for the protection of all its members . . . in preventing the spread of infection . . . and in some cases the removal of patients to hospital . . . the patient himself may be subject to penalty if he do anything at the risk of spreading infectious disease." These provisions apply in practice almost exclusively to the acute infectious diseases, though in some cases the wording of the statute appears wide enough to cover other diseases. As regards venereal diseases, it is judged that "the adoption of notification would doubtless have an important effect in emphasizing the infectious character of these diseases, and in causing their dangerous nature to be widely known." It "has also been advocated as an aid to the removal of conditions favourable to their propagation, such as bad housing and overcrowding."

The Commissioners, however, sum up this part of the subject as follows:

We think it clear, however, that if a case for notification of venereal diseases is to be established it must be based upon the assistance which notification would afford to the treatment of the individual and the consequent protection of the community, and not on the ground that it would facilitate general preventive measures.

The essentials for their treatment and prevention are prompt diagnosis and prompt and continuous treatment. The majority of medical witnesses were of opinion that there would be reluctance on the part of practitioners to notify cases, and if compelled by law, the result would be an even greater resort to unqualified persons.

To compel unqualified persons to notify would be impossible owing to the difficulty of proving that they knew the nature of the case. After considering the *pros* and *cons* for notification the report concludes:

The main objection which has been urged against notification of venereal diseases is that it would actually do more harm by deterring people from seeking treatment and by driving them more than ever into the hands of unqualified persons.

It is possible that the situation may be modified when these facilities (for treatment) have been in operation for some time, and the question of notification should then be further considered. It is also possible that, when the general public becomes alive to the grave dangers arising from venereal disease, notification in some form will be demanded.

Anonymous notification for statistical purposes was considered, but the conclusion arrived at was that it would not be satisfactory. The necessity for careful taking of statistics of patients treated is urged, especially with regard to the administration of salvarsan.

Detention of Persons Suffering from Venereal Diseases.

The Commissioners consider that the provision of free treatment would be useless if the treatment were not carried out to its termination, and make the following observations:

A person may discontinue his treatment when, though he is still infectious, the immediate symptoms have disappeared, and he is thus able to spread the disease, and may afterwards return in as bad or a worse state to be treated again.

The application of compulsion to cases in which there is no sense of responsibility, where no restraint is thought of, and where contagion is in its most active and virulent form, can be defended on strong public grounds.

Apparently in Denmark the doctors have the power of detaining hospital patients until free from infection, but it appears the power is not rigidly enforced. Under the Poor Law Amendment Act, 1867, Section 22 gives this power to the workhouse authorities on the certificate of the medical officer, but "doubts have arisen whether this provision is applicable to the case of venereal diseases." The discharge of infectious patients from prisons calls for special attention, particularly as it appears that the figures for those on short sentences are by no means complete. It would seem desirable that any doubt on the power to make a Wassermann test or administer salvarsan "should be removed by the addition to the statutory power of the Prison Commissioners." After observing that "the case for the detention of prisoners suffering from venereal disease until they are no longer a danger to the public is a strong one, and in some countries action of this kind is already taken," the report points out that this would

cause hardship in the cases of short sentences, the detention would present a "harder penalty than that inflicted for a more heinous offence on one without manifest venereal disease." In the case of the services, though there is no power to detain men against their will whose period of service has expired, there is power to continue the treatment in hospital after discharge. It appears that this practice is usual in the army but needs reinforcing in the navy.

Treatment of Venereal Diseases by Unqualified Persons.

Fear of disgrace and desire for concealment foster self-treatment or resort to quacks. "This is true of all sections of the community, and we are informed that the upper classes resort to quacks as readily as the poor." The quack thrives on secrecy, credulity, and ignorance of the seriousness of the disease. He promises quick cure, no publicity, no inconvenience, and small cost. The following passages are quoted in full:

> "Unqualified practice exists in several forms; many chemists prescribe for the diseases; in some parts of the country herbalists are largely resorted to, while attractive advertisements of remedies by persons who claim to be specialists in venereal diseases are common in certain newspapers and elsewhere."
>
> "We have no hesitation in stating that the effects of unqualified practice in regard to venereal diseases are disastrous, and that in our opinion the continued existence of unqualified practice constitutes one of the principal hindrances to the eradication of those diseases."
>
> "By the intervention of the unqualified person, the stage at which the permanent eradication of the disease is possible is lost . . . treatment is rendered more difficult, protracted, and expensive, and the risk of the disease being communicated to others is very largely increased."
>
> Further, quacks by wrong diagnosis "in order to retain a patient, or from ignorance, are not infrequently responsible for causing much unnecessary suffering and acute mental depression, leading in exceptional cases to suicide."
>
> "We were informed that, in some parts of the country, herbalists are largely resorted to, and we therefore took evidence of a representative of the National Association of Herbalists. This evidence speaks for itself, and in our opinion effectually disposes of the claims of herbalists to be regarded as competent to treat venereal diseases."

The hope is expressed that the education of the public in these matters, and the proposed provision of free treatment will tend to diminish unqualified practice. In the army, in Denmark, and in Italy, where some such conditions exist, this result is attained, and the Commissioners continue:

> "We strongly endorse the recommendations of the Select Committee on Patent Medicines that all advertisements of remedies for venereal diseases should be prohibited."
>
> "We should have advocated legal provisions making the treatment of venereal diseases by unqualified persons a penal offence, but we recognize the practical difficulties in securing the effective operation of such a law in present circumstances."

Marriage and Communication of Disease.

The misery and suffering caused by the marriage of an infected person, through communication of the disease to the healthy partner and to the children, was testified to by many witnesses, and the report contains the following observations on this point:

> The question, therefore, arises what steps can be taken which may have the effect of preventing the marriage of persons while in an infectious condition from venereal disease. Various suggestions have been discussed in the course of the evidence as to the possibility of legislation preventing the marriage of such persons unless and until the intending husband or wife is certified by a competent authority to be in a condition to marry with safety. We are of opinion that all such suggestions are impracticable at present. . . .

The position of the medical practitioner who knows of intended marriage of an infected person is unenviable. He may not be able to restrain the purpose of the infected person, and he dare not intervene to check the marriage. The Commissioners report:

> "We think that a change in the law in this respect is much needed. We, therefore, recommend that such communication, when made bona fide to a parent, guardian, or other person directly interested in the welfare of the woman, or the man, and with the object of preventing or delaying a marriage with a person who is in an infectious state, should be deemed to be a privileged communication. This proposal is supported by the high authority of the President of the Probate Division."

The Commissioners also support the recommendation of the Royal Commission on Divorce and Matrimonial Causes that the marriage of an infected person should be ground for obtaining a decree of annulling the marriage by the injured party. They believe that this provision would strengthen the hands of the medical profession in checking or delaying dangerous marriages.

Education.

The medical evidence has led the Commission to the conclusion that the average education of medical men in the diagnosis and treatment of venereal diseases is insufficient. The overcrowded state of the medical curriculum, and the fact that syphilis must be studied in relation to disease of most of the organs, complicate the proposal for a special course. But the necessity for special teaching and the possibility of study in the proposed clinics is urged:

> We consider that one of the most successful means to secure increased attention to the early and correct diagnosis of these diseases would be that questions relating to syphilis and gonorrhoea should be systematically set in medical examinations, so that the knowledge acquired in these diseases by examinees may be properly tested. The President of the General Medical Council stated that this was already done to a large extent.

The education of the public is a more difficult matter. Children under 14 are rarely fit for instruction in such subjects, and the Commission support the objection to "schematic instruction." They agree in the value of the growing practice "of head teachers to have private interview with pupils before they leave school to give moral instruction and to offer warnings against probable temptations." In public and secondary schools the need for teaching on these subjects is considered to be greater owing to the fuller age of the pupils.

> We believe the subject is receiving increasing consideration on the part of the heads of such schools.
>
> Much remains to be done in the universities by those who are responsible for the moral welfare of the undergraduates.
>
> Books and pamphlets have been brought to our notice which are not only unsound from a medical point of view, but are calculated to be injurious by reason of the way in which the questions are treated. We consider that no such publications should be countenanced by educational authorities unless issued with the imprimatur of the National Council for Combating Venereal Disease.

The report adds:

> We look to the various voluntary agencies which have been formed for promoting the welfare of the young of both sexes as important aids in carrying out the objects we have in view. Associations such as the White Cross League and the Alliance of Honour have already done valuable work, but much can be done also by properly managed boys' and girls' clubs, the Boy Scouts, the Boys' Brigades, and other similar agencies.
>
> The fact that we recommend that free treatment should be provided for all sufferers makes it, in our opinion, all the more necessary that the young should be taught that to lead a chaste life is the only certain way to avoid infection.

The report concludes with an expression of hope that the publicity given to the matter by reason of this inquiry will lead to a public enlightenment of the dangers of the diseases, and the folly of doing anything to prevent their early diagnosis and treatment. "There can be little doubt," it says, "that a franker attitude towards these diseases would lead to less concealment, often involving recourse to quack remedies, which may retard cure or render it impossible, and would thus assist in checking one of the greatest evils that can afflict a community."

THE late Sir George Scott Robertson, K.C.S.I., M.P., Lieutenant-Colonel I.M.S. (retired), left estate valued at £59,411.

British Medical Journal.

SATURDAY, MARCH 11TH, 1916.

THE OBJECT AND PURPOSE OF ENROLMENT.

IT may be advisable to state once again very briefly the purpose with which the Central Medical War Committee and the Scottish Medical Service Emergency Committee have established the system of enrolment, of which all medical men under the age of 45 next birthday are asked to take advantage. Its object is to supply the needs of the army, while safeguarding those of the civilian population and minimizing the loss and inconvenience to individual practitioners. Its purpose is to place in the hands of the professional bodies mentioned the names of all civilian medical men of military age—that is, under 45 next birthday—together with the particulars of the obligations, public and private, of each man. These medical bodies being fully informed of the position and difficulties of each man and each district will weigh them against those of other men in the same and other districts, so that those who can go with least detriment to their own interests and those of others may first be asked to fulfil the obligation under which enrolled men place themselves to accept a commission in the Royal Army Medical Corps. Not every man who enrols will be wanted by the army, but the Committees, having all the facts before them, will be able to nominate, when called upon to do so by the War Office, the number required from among those who can at the time be spared most easily from their ordinary occupation. Ample notice will be given to each man when a call is likely to be made upon him, and, as will have been seen from the official statement published last week (p. 348) and the Army Council Instruction printed in the SUPPLEMENT to this issue (p. 43), the War Office recognizes enrolment as fulfilling the obligation of medical men who are attested, or who come under the Military Service Act.

At its meeting on March 1st the Central Medical War Committee had before it the War Office statement, and took action thereon. The Army Council Instruction in the SUPPLEMENT this week is very explicit, and we only desire now to call attention to two points. The first is that the present is in accordance with previous announcements: that doctors who have undertaken to accept a commission in the Royal Army Medical Corps, if offered one, will not be taken for general service; and the other, that doctors will not be called up, whether by reason of attestation or under the Military Service Act, until after March 31st, 1916. The Central Medical War Committee instructed its Executive Subcommittee to consider at once in what way the enrolment scheme can be pushed to the maximum success, and to take steps to ensure that result. The Executive Subcommittee met on March 3rd and resolved to send a communication at once to all unenrolled practitioners under 45 next birthday, and to make an immediate canvass of them. The Military Service Act applies only to single men under 41, but it is recognized to be important that all men under 45 should enrol so that the Committee and the War Office may have full information as to the number of medical men available. Two special canvassing committees have been appointed, one for London and the other for the provinces, and both these committees met in London on March 8th. A circular to canvassers has been drawn up and is published in the SUPPLEMENT (p. 41).

The secretaries reported that the number of commissions posted from July 17th, 1915, to February 26th, 1916, was 1,501, an average of a little over 48 a week. The applications for commissions which had not yet been posted numbered 383. Between February 26th and March 3rd 435 certificates of enrolment had been issued. Local Medical War Committees, it was stated, had been formed in all districts with one exception—Dover.

THE REPORT OF THE ROYAL COMMISSION ON VENEREAL DISEASES.

DURING the South African war the army records showed a marked fall in the incidence of venereal disease, but with the return home of the troops the incidence increased. If any likeness may be expected between the conditions prevailing during and after that smaller war and those that may arise from this colossal struggle, then the report of the Royal Commission on Venereal Diseases is timely indeed.

We hope that the abstract of the report, the publication of which is concluded in this issue, will stimulate every reader to procure and study the original document, for it demands the thoughtful and critical consideration of medical men and women. It is certain that the nation at large will be profoundly moved by the picture it presents, and our profession must be prepared to give a balanced opinion on the practical recommendations that are based thereon.

The recommendations are of no dramatic character; rather they are essentially of a humdrum and everyday order. But they are none the less worthy of attention. They raise no thorny hedge of moral conflict to separate the best ethical instincts of humanity from the practical humanity of our profession. Details of procedure apart, there is no recommendation for the practical realization of which the sternest moralist and the medical practitioner cannot unite.

In the introduction to the report previous legislative enactments are cited, and of certain of these it is written: "Although the Commission are precluded by their terms of reference from considering the policy of the Contagious Diseases Acts, they wish to place on record their view that the evidence they have received, which includes that of several Continental experts, points to the conclusion that no advantage would accrue from a return to the system of those Acts. So far from this being the case, it is to be noted that the great improvement as regards venereal diseases in the navy and army has taken place since the repeal of the Acts."

The section dealing with the prevalence of venereal diseases is the least satisfactory part of the report, for the reason that, apart from the navy and army, no sufficient statistics exist. Many independent witnesses presented evidence of great value, but there was none for the country as a whole. Despite this lack, certain points are made clear. Venereal diseases are diseases of towns and cities, and not of the countryside. They are diseases of the highest and lowest of the social classes for which data is available. At the worst computation there is no ground for the alarmist reports of certain crude "social reformers" who have filled our ears with cries that in this people, "from the sole of the foot even unto the crown of the head there is no

soundness . . . but wounds and bruises and putrefying sores." But there is enough of the evil to demand radical treatment, more especially since the innocent suffer grievously in the punishment of the guilty.

The lack of statistics is a matter for caustic comment in the report. The unsatisfactory state of death certification is dealt with, and a strong recommendation made for confidential certification, a reform "for some years advocated by the British Medical Association." The voluntary hospitals are sharply taken to task for their failure to respond to the appeal of the Commission for figures of their patients. That criticism is not wholly justified. The appeal was made in such fashion as almost to ensure failure. It is otherwise with the navy and army medical services. It should be otherwise with the medical branches of the civil services; but the figures of the Poor Law institutions, police, and prisons are as poor as those of the voluntary hospitals. The failure of the Poor Law authorities is the more surprising seeing that reform in this matter was urged on the Local Government Board by an interdepartmental committee in 1904. For the future it is recommended that all institutions which undertake the treatment of venereal diseases with the assistance of Government grants should keep and render available accurate aggregate statistics regarding these diseases, and that in particular a record should be kept of the number of patients for whom salvarsan or its substitutes is provided at the public expense.

The recommendations that will receive most attention are those dealing with measures for checking the spread of the diseases. They fall into two groups: First is dealt with that part which falls to the lot of the physician; secondly, that which is the province of all who have to do with the training of youth and the forming of healthy public opinion.

The report insists on the necessity for prompt and accurate diagnosis, to be followed by efficient treatment. The evidence of many witnesses is embodied in the reiterated statement of the report that these diseases, when taken in hand at their onset by capable medical practitioners, are curable in almost all cases—curable in the sense that the specific germs can be eradicated from the infected human organism. The proof of this lies in the fact that reinfection may occur.

Widespread use of modern scientific measures of diagnosis in which doctor and bacteriologist unite their efforts is urged. Existing laboratories—whether those of universities, colleges, voluntary hospitals, or public health authorities—should be brought into line for this work, and, where necessary, new laboratories established. These should be subsidized by grants from imperial funds to the extent of 75 per cent., the balance being found out of the local rates. In line with this recommendation is that dealing with the treatment of infected persons. Existing institutions should be encouraged to make special provision for the treatment of venereal diseases by providing sufficient beds for the urgent cases and outdoor clinics for the others; and it is urged that evening clinics should be established to facilitate the attendance of the working classes. The Commission is against special clinics for the purpose, on the ground that a separation of the patients would militate against resort to the clinics; they should be attached to and form part of the ordinary hospital accommodation of the country, and in particular the voluntary hospitals. At present there are hospitals which refuse such cases; it is even found that the charters of some prohibit, and that subscribers to others are averse to, their admission. These anomalies, it is considered, should be rectified. The State should pay for these facilities in the same way as for the laboratories. The clinics should be available for all persons, and the patient should be free to attend at any clinic he pleases, not necessarily that in the district in which he resides. It is advised that if he is unwilling to go to a private doctor he should, even if able to pay, still be admitted for treatment at the public clinics. The organization of these clinics, it is considered, should be in the hands of the county councils and county boroughs, subject to the approval of the Local Government Board, and if the local authority will not provide the necessary treatment, that Board should be empowered to treat directly with the hospitals.

The Commission bases its recommendation of free and ample facilities for treatment on the necessity for combating the evil of unqualified treatment at the hands of chemists, herbalists, and quack "specialists." The denunciation of the evils that attend the exploitation of the infected by unqualified persons is emphatic and based on irrefutable evidence. The Commission went to the length of inviting the representative of one large group to give evidence, and in the words of the report "this evidence speaks for itself, and in our opinion effectually disposes of the claims of herbalists to be regarded as competent to treat venereal diseases." For the same reason the report urges that the recommendations of the Select Committee on Patent Medicines regarding the prohibition of all advertisements of remedies for venereal diseases should be put in force.

Difficulties bristle around the recommendation that persons who are not in necessitous circumstances should be admitted for treatment at public clinics. Their admission must be subject to such reasonable regulations as will prevent any serious abuse. The clinics are to be more than treatment centres; they are to admit all medical students and qualified practitioners for educational purposes, and will therefore improve the opportunities for acquiring knowledge of how to diagnose and treat these diseases.

Notification of the diseases was considered, but rejected as likely to be ineffective and dangerous. Ineffective because medical men would hesitate to disclose confidential information; and dangerous because it would tend to drive the disease underground into the hands of the charlatans. It is, however, thought that later on spread of public knowledge of the seriousness of the diseases may give rise to a public demand for some form of notification.

The Commission recommends that statutory recognition should be given to the principle that infectious venereal disease constitutes an incapacity for marriage. The process should be made available for all persons, however poor. Also it is recommended that the law should be amended so as to protect a medical practitioner who should deem it his duty to interfere actively in case of a proposed marriage of an infected person. Such a communication should be regarded as privileged. This proposal is supported by the high authority of the President of the Probate Division.

For the prevention of these diseases better education of the medical profession and of the public, particularly of the youth of the country, is advised. It is averred that the profession generally do not regard these diseases in a sufficiently serious light; that lack is to be corrected by fuller teaching in the medical schools, the potent influence of examination papers, and the facilities provided for special study in the new clinics. The Commission thinks that the State should provide a card to be handed by the doctor to his patient, setting out the grave dangers of the disease. The youth of the

country is to be instructed in regard to moral conduct as bearing upon sexual relation. "Such instruction should be based on moral principles and spiritual considerations, and should not be based only on the physical consequences of immoral conduct." Class instruction in elementary schools is negatived, but personal warning by the head teacher to the elder children, especially on their leaving school, is commended. The direct influence of the teachers in various grades of schools, colleges, and the universities is accentuated, the work of various forms of social effort for the young is commended and its extension on the same lines advised. Only the work of ministers of religion finds no place for remark in this crusade for righteousness. It will be seen from the trend of these recommendations that the Commissioners desire that the main effort of prevention should be directed to a widespread cultivation of personal control and the insistence that through this means alone can there be any real advantage to the health of the race.

We have endeavoured to indicate the main points in the report, and can refer to only two others. The one is the question of cost. It will be large, but the cost of the most complete laboratories and clinics would be a mere fleabite compared with the cost to the nation in sterility, infant death, child blindness and idiocy, parental weakness and exhaustion, nerve diseases and madness, and premature senility and death, that are the present effects of these diseases. As a financial investment the cost of the scheme would lead to the reaping of a national fortune. The second point is the sad reflection that so many of the recommendations of the Commission are no more than those which have been urged on the State by committees and commissions, and indeed passed into law in enactments that are now feeble by reason of lack of usage. Let us hope that the latent period of inertia will be overcome by this summation of stimuli.

THE TREATMENT AND EDUCATION OF DISABLED MEN.

THE Naval and Military War Pensions Act, 1915, which received the Royal Assent on November 10th, 1915, is entitled "An Act to make better provision as to the pensions, grants, and allowances made in respect of the present war to officers and men in the Naval and Military Service of His Majesty and their dependants, and the care of officers and men disabled in consequence of the present war, and for purposes connected therewith."

The first clause directs that a Statutory Committee of twenty-seven members shall be set up, consisting of nineteen representatives of the Crown and Government departments, two of the Soldiers' and Sailors' Families Association, and six, of whom some are to be women, appointed by the general council of the Royal Patriotic Fund Corporation. The Committee has been set up and held its first meeting on January 17th. The Prince of Wales is its chairman, and Mr. Cyril Jackson its salaried vice-chairman.

The Act directs that the council of every county and county borough, and every borough or urban district having a population of not less than 50,000 which so desires, shall set up a local committee constituted according to a scheme framed by the council. The Statutory Committee has drafted and issued a model scheme, which, in accordance with the Act, provides for the division of a county into districts, each with its district committee. A borough or urban district having a population of not less than 20,000 may have its own district committee, and the metropolitan boroughs are to be separate districts. The council of the county, county borough, or district will appoint at least a majority of the local or district committee, but the scheme must provide for a substantial representation on both orders of committees of persons who have been performing within the area, either as members of the Soldiers' and Sailors' Families Association, or the Soldiers' and Sailors' Help Society, or otherwise, duties similar to those to be performed by the committees under the Act. At present the work of looking after disabled men is being carried on by the voluntary organizations, which, as the Marquis of Crewe stated in the House of Lords the other day, are doing it very well, and the Statutory Committee will maintain permanent relations with them.

At the first meeting of the Statutory Committee three subcommittees were appointed from among its members—the organization and general purposes, the finance, and the pensions, grants, and allowances committees. As the Parliamentary Secretary of the Local Government Board is to be *ex officio* a member of all these subcommittees, it is assumed that the intention is that the general administration of the Act shall be controlled by that Board.

Schemes made by a local committee must have the approval of the Statutory Committee, but the Prince of Wales, speaking as chairman of the Statutory Committee on February 1st, said that Parliament did not intend that any hard and fast limitations of a uniform character should be imposed upon the various local authorities. Just as counties and boroughs and other populous areas differed in many essential particulars, so it was not expected that their schemes for this experimental work should conform to any one pattern, but should present a considerable variety of features; they could be remodelled in the light of a larger experience. In concluding his speech the Prince said that every effort ought to be made to compensate by the truest form of neighbourly kindness for the deprivations caused to soldiers and sailors by their willingness to sacrifice life, health, and happiness at the call of their country.

One of the functions of the Statutory Committee and of the local committees is "to make provision for the care of disabled officers and men after they have left the service, including provision for their health, training, and employment," and the local and district committees, as well as the Statutory Committee, are to appoint special subcommittees, including representatives of employers and of labour, to make this provision. The Statutory Committee has already appointed a subcommittee for this purpose, and its composition is given in our parliamentary notes. Until a disabled officer or man has left the service his treatment and training are under the control of the War Office, and in a very large proportion of cases his ultimate fate in regard to his power to earn his own living in whole or in part, and so again becoming a useful member of the community, will by that time have been decided. The committees set up under the Naval and Military War Pensions Act will have to deal with men who, in the opinion of the army medical authorities, cannot again be fit for military service. The main duty of the statutory and local committees in regard to such men will be to train them and find employment for them. According to the figures given by Lord Crewe on February 29th, out of a total of 23,000 men whose names were received by the Board

of Trade from the Admiralty and the War Office between June, 1915, and January, 1916, 13,000 had applied to the Labour Exchanges for help in finding employment. In round numbers employment had been found for 5,400; 1,400 were still on the register, but close on 6,000 had cancelled their applications, either because they were not fit for any serious employment or because they had found work otherwise.

In his speech on St. David's Day, which we briefly reported last week, Mr. Lynn Thomas said that he had received a letter from a well known surgeon of a neutral country, who, after visiting the lines of two of the belligerents—apparently the German and the French—had said that general surgery had had little to learn from the present war, except on two points: the one was the value of the prophylactic use of anti-tetanus serum, and the other the importance of orthopaedic treatment of wounded men. Some idea of the magnitude of the problem is afforded by the statement of the Prince of Wales on February 1st, when, in his speech to the Statutory Committee, he said that the total casualties of all ranks in the South African war were 44,876, while the total casualties of all ranks in the present war numbered at that time 549,467. A certain proportion of these will be incapacitated by the nature of their wounds from doing any useful labour; others will, at the best, be able to do very little; but the proportion of those who have suffered wounds of the limbs, and by early and adequate orthopaedic treatment can be put in a position to be useful workers, may, it is reasonable to hope, prove to be large. The treatment, however, must be instituted early, must be inspired by orthopaedic experience, and must be continuous. We have reason to believe that the army medical authorities are alive to the importance of early and thorough treatment, but the principle must be grasped by the public also, in order that the committees under the Pensions Act may be adequately provided with funds to ensure that the orthopaedic treatment and education of men discharged from the army or navy shall be both adequate and continuous. From this point of view alone there is a very useful field of work for the Statutory Committee and the local and district committees. The sooner it is taken in hand the better.

ANTISEPTIC ACTION OF THE CHLORAMINE GROUP.

AT the meeting of the Royal Society on March 2nd a paper on the antiseptic action of substances of the chloramine group was presented by Professor J. B. Cohen, F.R.S., Dr. H. D. Dakin, M. Daufresne, and Dr. J. Kenyon. The probability that the formation from proteins of substances containing halogen was an intermediate stage in the germicidal action of hypochlorites was considered to make it desirable to investigate systematically a number of substances containing the (NCl) group. Among the substances investigated the most promising was the group of sulphochloramides as prepared by Chattaway. The main results of the investigation were stated to be as follows: (1) Almost all the substances examined containing the (NCl) group possessed very strong germicidal action. (2) The presence in the molecule of more than one (NCl) group did not confer any marked increase in germicidal power. (3) The germicidal action of many of these chloramine compounds was, molecule for molecule, greater than that of sodium hypochlorite. (4) Substitution in the nucleus of aromatic chloramines by Cl, Br, I, CH_3, C_2H_5 or NO_2 groups did not lead to any very great increase in germicidal activity. More commonly there was a moderate diminution. (5) The chloramine derivatives of naphthalene and other dicyclic compounds of sulphochloramide type closely resembled simpler aromatic chloramines in germicidal action. (6) The few bromamines examined showed a slightly lower germicidal action than the corresponding chloramines, but sodium sulphobromamides were much more active than sodium hypobromite. (7) Derivatives of proteins prepared by the action of sodium hypochlorite and containing (NCl) groups were strongly germicidal. Blood serum inhibited their germicidal action to much the same extent as it did that of sodium hypochlorite or the aromatic chloramines. Among the above products para-toluene-sodium-sulphochloramide was selected as being on the whole most suitable for practical use. It was easily and cheaply made; it was relatively non-irritating to wounds; it was non-toxic and very soluble in water, and might be kept unchanged both in the solid state and in solution for a long period. A table was appended giving bacteriological results obtained from about fifty compounds of this class. A paper giving an account of the nature and practical uses of this substance, para-toluene-sodium-sulphochloramide, was published by Dr. Dakin, Professor Cohen, and Dr. Kenyon in the BRITISH MEDICAL JOURNAL of January 29th (p. 161), where its preparation, cost, and mode of action were also considered. Unfortunately, the anticipation that it could at the present time be cheaply produced does not seem to have been fulfilled. It is stated that, owing to the use of chloramine bodies in the making of explosives, materials ordinarily obtained as by-products have now to be made. The substance has been placed on the market under the name of "tolamine," because the word chloramine had already been appropriated by an American firm of druggists for a totally different kind of medicine.

PETROL FOR DOCTORS.

THE Medico-Political Committee of the British Medical Association has for some time been giving anxious consideration to the difficulties experienced, and likely to be increasingly experienced, by doctors in obtaining petrol for their cars or motor bicycles. Several representations have been made to the Board of Trade on the subject. A special meeting of the committee was held on March 8th to confer with representatives of certain Government departments concerned with the larger question of the supply of petrol for Government requirements generally and for the civil community. The conference, which was necessarily confidential, dealt with several matters of great importance. The Government representatives indicated the necessity of reliable information being rapidly forthcoming as to the quantity of petrol actually needed month by month by the medical profession in the different parts of the country if any effective action were to be possible to the Government for arranging, as was desired, that doctors should be secured their minimum requirements for fulfilling their duties to the civil community. Certain immediate steps were decided on with a view to obtaining that information forthwith. It was stated that the Government departments entrusted with the question were anxious that the needs of the medical profession should receive special attention in any scheme that might be evolved for the distribution of petrol under any new conditions that might be set up. The Committee, whilst realizing from the discussion the great practical difficulties that will have to be solved by any Government scheme for the community of the kind that seems to be contemplated, feels assured that the special case of the medical profession is being fully recognized in the responsible quarters, and the Committee will not cease to keep in close touch with any further developments. The steps above mentioned will probably include the issue of certain inquiries to medical practitioners throughout the country, and it is hoped that in the interests of each individual, and of the profession as a whole, these questions, when received, will be answered fully and without any delay.

WITH THE MONTENEGRIN ARMY IN THE FIRST BALKAN WAR.

A MEMBER of the Austrian Red Cross, Dr. Hermann von Schroetter, has lately published a book giving an account of his experiences in the Montenegrin campaign against Turkey in the first Balkan war. Though certain passages in his book show that even at this date the political relations between Montenegro and Austria were somewhat strained, Dr. Schroetter gives a most sympathetic account of the valiant little Montenegrin army. It must indeed be strange for a man who shared the vicissitudes of the Montenegrins in their heroic battles with the Turks to find his own country only a few years later at war with Montenegro. The conditions under which the Montenegrins fought and suffered in the first Balkan war were, no doubt, very similar to those obtaining in the present war, and Dr. Schroetter depicts the heroic atmosphere of Montenegro in stern but sympathetic colours. Not only was every male from 15 to 70 a soldier, but the women took part in the fighting, following their men even into action, as well as trudging day by day under heavy burdens of food and ammunition. In the battle of Kiri many women were wounded, and seven were admitted to Dr. Schroetter's field hospital. They were cared for in the same ward as the wounded men, and helped to keep up their courage, vying with them in bearing pain with fortitude. Again and again does Dr. Schroetter speak of the hardihood of these mountaineers, with whom it was a point of honour not to break down by so much as a moan, were their pain, hunger, and thirst never so great. But it was not altogether easy to treat them. They did not cry out for anaesthetics for operations big and small, but they often stoutly resisted amputations—not for fear of pain, but of the resulting mutilation, which was regarded as a disgrace by the patient's relatives as well as by himself. One of the wounded, a girl of 18, acquired the nickname of "the wild cat," for she would not at first allow her three wounds to be dressed. Naturally Dr. Schroetter found only the most elementary surgical equipment of use. Stumbling in the dark among heaps of wounded lying in a single room, he found he had left behind the most necessary adjunct to first aid—a pocket electric torch. His account of the wounds he observed tallies more with the experiences of the South African war than with those of the present war, probably because the fighting with the Turks soon assumed the character of guerilla warfare, the majority of the wounds being inflicted at long range by rifle bullets.

INJURIES AND DISEASES OF AVIATION.

FROM the medical point of view the Flying Service is not quite like any other, owing to the special demands it makes on those who take it up, and the special lesions to which it may give rise. Staff Surgeon H. V. Wells, R.N., has drawn attention[1] to these peculiarities, quoting a number of examples to illustrate them. These accidents of aviation are mainly those due to sudden stoppage of the aeroplane, when, owing to some accident, it falls headlong to the ground, or by some loss of control lands at too sharp at angle. Here the aviator is thrown violently forwards as the machine hits the ground: he is usually strapped firmly to his seat, and so his head and neck are jerked forwards, with the danger of his striking some portion of the structure in front of him and injuring his forehead, or of straining the muscles of his neck, or even of fracturing a vertebra without displacement. It is thought that an abdominal belt should always be used to hold the aviator in his seat; the belt should have a quick release apparatus, and be fixed to the aeroplane rather than to the seat itself. In some instances the aviator has succumbed to profound shock without any obvious grave injuries after a fall; Staff Surgeon Wells suspects that there are numerous minor internal haemorrhages in these cases, but it would be interesting to know whether fat-embolism is not the actual cause of death here, whether bones are broken or not. It is known that mere concussion of the bones of experimental animals can produce fat-embolism. In a few instances eye injuries have resulted from the working loose of some nut or bolt in a tractor aeroplane, and the blowing of the piece of metal backwards, in the draught of the screw, into the aviator's face. Frost-bite of the face has occurred after aviation at high altitudes; partial anaesthetization by the vapour of escaping petrol used to be common, before a tap was fitted enabling the petrol supply to be controlled from the aviator's seat. The exhaust gases from the motor have been known to reach the pilot in quantities large enough to cause headache and sleepiness. So far as the selection of candidates for aviation is concerned, several interesting points have been brought to light by recent experience. Some pupils are found on trial to have no genius for aviation; they are not lacking in nerve, but cannot acquire the involuntary spontaneous co-ordination of hand and eye that is indispensable for the aviator, and are never comfortable when flying. The name suggested for this condition of mind is "aerosthenia," surely a misprint for "aerasthenia." It is an immediate disqualification for aviation. So far as age is concerned, it is now found that boys of 18 or 19 are not too young to learn to fly; the age of 30 is the limit at which pupils should be taken, except in rare instances. Pupils who have to wear glasses should be rejected; an interesting case quoted is that of a pupil with full vision in each eye separately and with both eyes together, who could only land with difficulty and with one eye closed. He was found to have "a concomitant squint," preventing him from judging his landings. It is essential, too, that the aviator should have free movements in his knee and ankle joints, otherwise he will lack delicacy in his control of the rudder bar, a matter of supreme importance. During 1912 and 1913 researches were made into the effects of flying on the pulse-rate and blood pressure of the aviator. The results were inconclusive; nearly all the cigarette smokers seemed to have rapid pulses, as was, perhaps, to have been expected. Quite recently this question has been gone into again by Dr. G. Ferry,[2] who finds that his own pulse becomes small and rapid in proportion as he ascends, becoming slower with the descent. So far as the arterial blood pressure is concerned, the maximum pressure varies during ascent, generally falling a little, the minimum pressure falling 10 or 20 millimetres of mercury. During the descent the maximum arterial pressure usually falls and the minimum pressure increases. Speaking generally, the arterial pressure is lowered after a flight. Dr. Ferry concludes that aviators should be chosen from those who have no disease of the circulatory system.

[1] *Journal of the Roya Naval Medical Service*, London, 1915, i, 55, and 1916, ii, 65.

MALARIA ON SHIPBOARD.

STAFF SURGEON LESLIE M. MORRIS has described in an interesting paper published in the *Journal of the Royal Naval Medical Service* (January, 1916), the experiences of the *Hermione* and the *Bristol*, when employed in the river off Tampico during the Mexican revolution, from December, 1913, to July, 1914. There are lagoons and marshes on both sides of the river, and the district is very malarious from May to January. The crews of both ships were attacked by malaria in spite of the precautions taken. The *Hermione*, which had a complement of 325, suffered two outbreaks; the first cases, beginning twelve days after arrival, were contracted on the first night in the river, when *Anopheles* swarmed on board and the precautions which could be taken were inadequate. It produced 51 cases; the second, which began after the first rains in May, produced 55. The type of infection was tertian benign, and subtertian or malignant in a ratio of 4 to 1. The treatment adopted was to give at the onset 15 grains of

[2] *La Presse médicale*, Paris, February 14th, 1916, p. 65.

quinine by the mouth with 3 grains of calomel; then 10 grains of quinine thrice a day for five days, and then 10 grains twice a day for another five days. This was followed by a course of 5 grains thrice a day for three weeks, and afterwards a weekly dose of 10 grains every Sunday for three months. If a case did not react satisfactorily, if gastro-intestinal symptoms were troublesome, or if the temperature was over 103° the quinine was given by intramuscular injection, 1 gram of the bihydrochloride in 1 c.cm. of sterile water. The main prophylactic measure was the use of mosquito-proof brass wire gauze netting, as used in Panama, over the ports and doors, while muslin was used to close a number of other openings. The *Bristol*, which arrived at Tampico on June 9th, 1914, was provided with a supply of mosquito-proof copper wire fittings made and adapted at Portsmouth, and there was a quantity of wide mesh muslin in store. The men received a dose of 10 grains of quinine on alternate evenings, and all were required to be between decks and behind screens by 6 p.m. Watch-keepers and signalmen on deck were supplied with helmets having muslin veils, wore gloves, and had their feet and ankles protected, and no lights were permitted on the upper deck at night. Nevertheless, on the thirteenth day cases of malaria began to occur, at first among the ward-room domestics and cooks from the upper deck galleys; next followed the younger members of the ship's company from the after-part of the ship. The *Bristol* left Tampico on June 29th, and the number of fresh cases decreased rapidly after she had been away for two weeks. Altogether, there were 95 cases out of a ship's company of 375. When war was declared the ship was free from malaria, but relapses occurred in September, due, it was thought, to the hard work entailed by constant steaming and coaling off the coast of Brazil in extreme heat. Another series of relapses occurred when the ship was employed for four months in the Magellan Straits searching for the *Dresden*. They were attributed to the cold weather and extremes of temperature experienced. None occurred after the ship proceeded to Gibraltar in May, 1915. Staff Surgeon Morris says that the efficient screening of a ship presents difficulties which can only be overcome with the intelligent help of all officers and men, and that to gain the help of the ship's company lectures are necessary. He advises that ships proceeding to known malarial localities should be previously fitted with gauze-covered doors and frames for hatches, scuttles, and air supply inlets. Coverings for other openings can be quickly improvised if reserve supplies of gauze and open-mesh muslin are available. He has no doubt as to the value of the regular administration of quinine as a prophylactic. He states that in the German ships, in a Dutch ship, and in some of the American ships 1 gram was given every fourth day. Another plan which he considers good was to give 10 grains for three consecutive evenings, followed by two days without quinine. Only one officer of the two ships contracted malaria, and he attributes their immunity to the fact that nets were carefully used and quinine regularly taken. He also considers that a moderate amount of alcohol taken after sunset is beneficial in aiding to ward off malarial infection, and suggests that it would be a good plan to issue the rum ration after evening quarters in malarial localities when men are taking quinine.

SHORTAGE OF DRUGS IN AUSTRIA.

LAST autumn the representatives of the Pharmacological and Pharmacognostical Institute of the University of Vienna issued a warning notice as to the shortage of certain drugs. It appears that *Digitalis purpurea* was mainly obtained from Germany, which had prohibited its export. It was urged that other varieties of digitalis and strophanthus should be used instead. The supply of camphor was so short that it was necessary to confine its prescription to internal use. The supply of ipecacuanha and senega had been cut off, and it was therefore advisable to use quillaia bark and saponaria root as expectorants. There was a great shortage of purgatives, as rhubarb root, senna, cascara, aloes, and jalap were all imported drugs, and castor oil, which had been imported from France and Italy, could no longer be obtained in Austria. The best native alternatives for these purgatives were said to be the phenolphthalein preparations and frangula, which grows plentifully in Austria, and is reputed to be as effective as cascara. As the Austrian rhubarb root contains only half the amount of active principle found in the Chinese, the dose must be increased proportionally. The supply of atropine, scopolamine, apomorphine, physostigmine, and hydrastis were all short; in the case of the last named the synthetic hydrastin might be substituted. The antipyretics, pyramidon, antipyrin, phenacetin, and antifebrin, were all prepared outside Austria, and were prevented from reaching the country by the prohibition of exports (presumably from Germany). The same was the case with aspirin and other salicyl preparations. Owing to the shortage of quinine it was necessary to confine its use to malaria. The importation of sulphur and iodine was no longer feasible; substitutes recommended as disinfectants were a solution of bromine in chloroform or benzene, and a 5 per cent. alcoholic solution of tannic acid. Very little balsam of Peru was left, and its place had, therefore, largely to be taken by ichthyol preparations.

THE ENROLMENT FORM A CERTIFICATE OF ELIGIBILITY FOR HOME MILITARY POSTS.

WE are able to publish in the SUPPLEMENT this week, page 42, an Army Council instruction (24/Gen. No./4749, A.M.D. 1) which will be read with much interest by many members of the profession who are anxious to serve the country at this time but have not yet been employed. The notice issued by the Medical Department of the War Office on September 3rd, 1915 (SUPPLEMENT, September 18th, 1915, p. 130), advanced the age of medical men for general service at home and abroad to 45, but made it plain that no man under the age of 45 years would be employed in home military service. Recently the Central Medical War Committee represented to the War Office that it was desirable that there should be exceptions to this rule; it was, for instance, pointed out that a man under 45 years of age who had enrolled with the Committee for general service in the medical sense—that is, for work at home or abroad—might be employed at home on temporary duty pending the time when he may be required for full service. The Army Council instruction dated March 2nd accepts this position, and definitely states that medical officers who have enrolled with the Central Medical War Committee, or the Scottish Medical Service Emergency Committee, for service with the army and are in possession of a certificate may be considered eligible for army duty irrespective of their age. This means that a man under 45 who is enrolled with the Committee will be eligible for service in such posts as civil medical practitioner or medical officer examining recruits whilst he still remains at home in private practice.

MOST of the members of the Royal Commission on Venereal Diseases have accepted an invitation to join the National Council for Combating Venereal Diseases. There is little doubt, from past experience, that unless there is some independent society capable of stimulating the powers that be, and repeating that stimulus, the most ably drafted report and the most excellent recommendations of a Royal Commission will most probably not be carried out. It is therefore to be hoped that influential members of the profession will join the National Council and help Sir Thomas Barlow and those who are associated with him in its work.

Medical Notes in Parliament.

Retrenchment.—The Chancellor of the Exchequer stated on March 7th that early effect would be given to the recommendations in the report of the Retrenchment Committee as far as it was found possible to adopt them. The Treasury was considering the terms of the necessary communications to the public departments on the various questions raised.

Tuberculosis Order.—The Parliamentary Secretary to the Board of Agriculture stated on March 7th that the Board has decided to maintain the suspension of the Tuberculosis Order, 1914, until after the war. The question of modifying the Order had been considered, but it did not lend itself to modification within the lines of the policy laid down in the manner suggested by the City Council.

Cocaine in India.—On March 2nd the Secretary of State for India stated, in reply to Sir J. D. Rees, that cocaine had in the past been smuggled into India by Austrian and German and also by other steamship lines. The cocaine habit, in a more or less furtive form, existed in Indian seaport towns, and in a less degree in the largest inland cities; but, so far as information went, it appeared to be unconnected with the opium habit or with measures taken to suppress the latter.

War.

Disablement Subcommittee of Statutory Pensions Committee.—The Naval and Military War Pensions Act, Section 3, Subsection (3) directs the Statutory Committee appointed under the Act to appoint a special subcommittee, including representatives of employers and labour, for the purpose of making provision for the care of disabled officers and men. The Parliamentary Secretary to the Local Government Board stated, in reply to Mr. Butcher on March 2nd, that the committee as then constituted was as follows, but a few members whose consent had not been obtained might be added:

Ex-officio members: H.R.H. the Prince of Wales, as chairman of the Statutory Committee; Mr. Cyril Jackson, as vice-chairman of the Statutory Committee; Right Hon. W. Hayes Fisher, M.P.
Soldiers' and Sailors' Help Society: Lord Cheylesmore.
Officers' Families Association: Lady Roberts.
Admiralty: Admiral Sir Wilmot H. Fawkes, G.C.B., K.C.V.O.
Army Council: Mr. B. B. Cubitt, C.B.
National Insurance Joint Committee: Mr. D. J. Shackleton.
Labour Exchanges Dept. (Board of Trade): Mr. J. S. Nicholson.
Local Government Board: Mr. A. V. Symonds.
Board of Agriculture: Mr. F. L. C. Floud.
Representatives of Labour: Right. Hon. G. N. Barnes, M.P., Mr. Harry Gosling, Mr. Will Thorne, M.P., Mr. Herbert Smith, Mr. W. Mullins, Mr. J. E. Williams.
Representing the Co-operative Interest: Mr. Lander, Mr. Harry May.
Lieutenant-Colonel (R.A.M.C.) Sir Alfred Pearce Gould, K.C.V.O., Sir John Cowan, Sir Archibald McInnes Shaw, Mr. Patrick O'Brien, M.P., The Right Hon. R. Thompson, M.P., Mr. L. A. Martin, Mr. Harris Spencer, Dr. William Garnett (Educational Adviser, L.C.C.).

Mr. Hayes Fisher added, in reply to Mr. Hogge, that one of the first questions for the consideration of the Committee would be whether separate committees should be set up for the various nationalities of the United Kingdom.

Medical Students.—In reply to Mr. Pringle, on March 2nd, Mr. Tennant restated the position with regard to medical students as follows:

Medical students in their fourth or fifth years of study and those in their third year of study whose examination takes place during the winter session must either attest under the group system or become liable to the Military Service Act. The fourth and fifth year students will not be called up, and if the third year students pass their examination they also will not be called up, but if they fail they will be called up. Students who have not attested under the group system, and who in consequence become liable to the Military Service Act, must appeal to the local tribunal if they desire exemption.

Total Casualties.—The Prime Minister stated on March 1st that it was not advisable to make public the totals of casualties at regular intervals; figures would be given from time to time as the military situation might permit.

Wounded Prisoners in Switzerland.—On March 7th Mr. Malcolm asked the Prime Minister whether there were at the present time about 1,600 French and about 850 German prisoners of war suffering from specified diseases interned in sanatoriums in Switzerland, and whether the Swiss Government had offered to receive British prisoners similarly afflicted. The Prime Minister in his answer confirmed the statistics. Though the British Government had received no official invitation from the Swiss Government to send wounded prisoners to Switzerland in the event of an agreement being arrived at with the German Government, it was understood that such a course would be agreeable to the Swiss Government. The British Government was favourable to the proposal, and action was being taken in the matter.

Tuberculous Soldiers.—Mr. Tennant has informed Mr. Astor that the total number of soldiers invalided for tuberculosis dealt with by the Chelsea Boards in 1915 was 2,770. Cases of pulmonary tuberculosis were not separately recorded. Pensions were awarded in 1,641 cases and the claims were not accepted in 1,129.

Hospital Stoppages.—Mr. Forster (Financial Secretary to the War Office) stated on March 7th that a hospital stoppage of 7d. a day, or such less sum as the soldier's commanding officer might determine, was deducted when men were in hospital in circumstances which in the discretion of the commanding officer were held to justify the deduction. This discretion should prevent any case of real hardship.

Cerebro-spinal Meningitis.—In reply to a question on March 7th as to the number of cases of cerebro-spinal meningitis among soldiers in the district of the Portsmouth Command, Mr. Tennant said:

The figure for the Portsmouth District Medical Administrative Area, which includes the Portsmouth Garrison, Isle of Wight, Winchester Area, Dorsetshire Area, and Portland Defences, including Weymouth, is 31. The number of deaths has been 8. Special measures are carried out, under an organization set up fifteen months ago, to guard against spread of the disease. These consist of isolation of the patient, disinfection of the patient's clothing, etc., segregation and special medical treatment of contacts and carriers.

Colonial Allowances.—Mr. Forster (Financial Secretary, War Office) stated on March 1st, in reply to Mr. Swift MacNeill, that colonial allowance is a special allowance designed to meet the extra expense thrown upon officers of the British army by service in Egypt and certain other places under peace conditions. The question of its discontinuance during war in places in which it was drawn in peace presented difficulties, but was under consideration. He regretted that it could not be extended to officers serving at Salonika.

Non-Poisonous Dope.—In reply to Mr. Rowlands, Mr. Brace said on March 7th that the main difficulty in the way of the adoption of non-poisonous dope for aircraft was that one of the essential ingredients was not produced commercially in this country at present. The conference between the War Office and the Admiralty considered the methods by which the supply of the ingredient could be increased, and efforts were being made to arrange for this. The Admiralty was continuing its experiments.

Military Service Act.—Many questions have been asked with regard to recruiting and the Medical Service Act.

Not a few have dealt with the constitution and procedure of local tribunals, some of them raising points relating to individuals. In reply to one question, the President of the Local Government Board said on March 7th that the tribunals had a difficult and ungrateful task; their duty was to administer the Act and the regulations to the best of their ability, and he believed that they were generally fulfilling that duty faithfully and honestly. If they came to a decision thought to be improper, the aggrieved party had the right to appeal.

On March 7th Mr. Watt asked whether men who had been declared medically unfit since August 14th, 1915, and had been again summoned, could have the matter tried in the civil courts. Mr. Tennant, in reply, said that he thought it might be assumed that it was the desire of all eligible persons to assist the administration of the Military Service Act and not to hamper it. A man who had a certificate of rejection in proper form, signed by the proper authority, was excepted from the provisions of the Act. Men who had not so offered themselves and been rejected since August 14th would be held to serve under the terms of the Act.

Mr. Tennant stated on March 7th that exactly the same standard was observed in respect of all classes of men coming before the army medical authorities for examination, whether they reported themselves for service under the Military Service Act or came forward voluntarily. Recruits were now, and had for some time past been, graded in different categories according to their suitability for various forms of military service. Otherwise the standard was exactly the same as three months ago.

THE WAR.

THIGH CASES.

(From a Correspondent in Northern France.)

COMPOUND fracture of the femur, from the point of view of the evacuation of such cases, was the subject chosen for discussion at the periodical meeting at the Australian Hospital on January 22nd, and its staff secured the representation not only of base hospitals but of all units dealing with these cases, between the time of their occurrence and the moment they are landed at a British port. The other visitors included Mr. Robert Jones of Liverpool and Mr. Lynn Thomas, C.B., of Cardiff, who were introduced to the meeting by Surgeon-General Sawyer.

The first speaker, a battalion M.O., said that all medical work in the fire trenches had to be done under the most adverse conditions. The liquid mud was sometimes so deep that if a wounded man fell into it he was liable to be suffocated. In his own area, moreover, the fire trenches were so battered that only after dark could he get into them. He had therefore commonly to leave first-aid work to be done by his orderlies, whom he distributed at intervals along the section of the trench occupied by his battalion. His instructions to them in regard to thigh cases were to aim at combating shock by administering a dose of morphine, making the patient comfortable by means of sandbags, and covering him with an overcoat and a waterproof sheet. The fracture was treated by bandaging the patient to one of the footboards running along the bottom of the trench and then placing this and the patient on the fire step or elsewhere so as to be as much as possible out of the way of the fighting men in order to avoid accidental disturbance. It was not easy, for the front trenches were necessarily very narrow. To keep the patient above water level it was sometimes necessary to drive in piles. As soon as darkness arrived four stretcher-bearers advanced, lifted the patient on his board out of the trench over the top of the parados, and carried him to a wheeled stretcher-carrier, though when the intervening ground was very rough and muddy it was found best to carry the stretcher on the shoulder. Arrived at the regimental aid post a Liston splint was substituted for the footboard, and the patient sent on to the advanced dressing stations in the bottom berth of an ambulance.

The next speaker (a field ambulance M.O.) said that cases usually reached them between 10 p.m. and 3 a.m., and with their clothes caked in mud. The first aim was to try to get the patient warm by changing his clothes—putting him on a dry stretcher, and keeping the room heated. The chief trouble about a thigh case was the damage to the soft tissues; it extended far beyond what superficial appearances suggested. Limbs which seemed about normal when they first arrived were often found enormously swollen by the morning. He found the first Page splints satisfactory to use because they allowed free access to the wound without disturbing the patient, and nowhere constricted the limb. A modified form recently supplied tended to buckle, and was otherwise less satisfactory. If the fracture were very high he preferred an interrupted Liston. To clean the wound he poured in hydrogen peroxide solution, which brought to the surface foreign bodies such as clothing. He removed bits of bone only if quite loose. Anaesthetics he rarely found necessary. Compound fracture of the thigh seemed to result in a kind of numbness, and if the patient had had a dose of morphine he generally slept through the dressing. If necessary he enlarged the wound sufficiently to allow the easy insertion of a drainage tube. The avoidance of constriction above the wound was a point of primary importance.

A motor ambulance convoy officer said he always chose the lower tier for thigh cases; they were thus subjected to less jolting and were within easier reach of the orderly. A Page splint was satisfactory provided it were fastened to the stretcher.

A casualty clearing station officer said that thigh cases arrived at his unit splinted in a variety of ways; sometimes, for instance, by a rifle, sometimes by a Liston splint. In default of some definite reason for immediate interference, such as haemorrhage, the usual practice was to leave the patient undisturbed for some hours, except that he was put on a dry stretcher and blankets. The speaker preferred to give an anaesthetic when cleaning up the wound, but now used stovaine anaesthesia, as he found that open ether was generally followed by chest trouble. To secure free drainage he made an incision between two and three inches long, and drenched the wound with normal saline. All free material was carefully removed, but nothing that seemed firmly attached to bone. In the way of splints he preferred a modified Thomas knee splint unless the fracture was high up; if so he used a McIntyre. Cases in which the main vessels were injured or gas gangrene was already present should, he thought, be submitted to immediate amputation. In his unit thigh cases were usually kept a week before they were sent to the base; meantime the wound was cleaned three times daily with normal saline and hydrogen peroxide. The mortality in these cases was between 10 and 12 per cent.

A second casualty clearing station M.O. said that they too generally left a thigh case alone for twelve hours or so before undertaking any surgical cleansing, for the shock was generally considerable. If operative measures were undertaken an anaesthetic was invariably given. Their idea, however, was that it was at the base hospital that the real work should be done; patients were therefore got away as early as possible. Generally, a modified Thomas knee-splint was used, unless the fracture was very high up. He had seen plaster-of-Paris used, but thought casualty clearing stations were not places for its employment.

At this point Surgeon-General Sawyer interposed a remark to the effect that the French, who attach great importance to immobilization in these cases, depended largely on plaster-of-Paris at their hospital at Châlons, and thought the English did not make sufficient use of it.

A train M.O. said that with the ambulance trains now in use it was possible to avoid taking a thigh case off the stretcher. The condition in which the patients generally reached the train reflected great credit on medical officers in the field. Sometimes, however, the labels did not state whether the patient had received morphine, and this created difficulties. Generally the cases required very little treatment in the train, and the splints and dressings need not be touched. But the work could not be expected to be always equally perfect. During heavy fighting, such as that round Loos, cases sometimes reached the trains inadequately splinted. In train work the use of sandbags was very helpful. There had been some curious cases in which patients who seemed to be doing very well died suddenly on the journey without apparent cause.

Another train M.O. said he would like to have more notes sent with the cases. It was essential, for instance, to know if the patient had recently received morphine. The sending down of the more serious cases should be deferred as long as possible. Provided the splint kept the fracture at rest it could hardly, from a train point of view, be too simple in construction.

A base hospital M.O. thought that all thigh cases should be incised and drained before dispatch. He generally used a Balkan suspension apparatus, but a Thomas splint was equally good. If the fracture was very high up he used vertical extension. When the patient was fit to be sent home he placed the limb in a Boulogne box splint. Hydrogen peroxide he found decidedly useful. There was a tendency to overlook the fact that sepsis was the principal source of danger in these cases.

A second base hospital M.O. said the cases were always put on a Bradford frame, which had been introduced at his hospital by some Harvard medical officers. It facilitated all nursing and allied work, and the patient did not from first to last require to be removed from it.

A third base hospital M.O. said the condition in which these cases arrived varied a great deal in respect of efficiency of treatment. At his hospital the practice was to have an *x*-ray picture taken forthwith and then make any necessary incisions. He made quite small incisions and covered the wounds with gauze.

Another officer from the same hospital said that all fractures in the upper third were now treated on a Bryan bed, and those in the lower two-thirds on a Thomas knee splint, furnished with a perforated zinc instead of a

bandage gutter. It was desirable that the patient should be able to move himself freely. This was impossible if a plaster-of-Paris splint were used.

An embarkation M.O. said that when cases were fitted with wide abduction splints it was difficult to get them from the ambulance on to the ship. For shipping purposes the Bradford frame was excellent. Full labelling of patients was very necessary.

A battalion M.O. here interposed a suggestion that the labels used should be so large that notes could be made upon them at every stage from the trenches to a home hospital.

A hospital ship M.O. said that the Bradford frame was excellent from his point of view. Cases sometimes arrived fitted with splints so large that they had to be kept on deck instead of placed in a cot. As a patient might be on board for as long as sixty hours it was necessary that they should be well and comfortably splinted, as also well dressed before embarkation. The staff of a hospital ship was necessarily limited and could not readily undertake the redressing of many cases. The cases were landed by lowering them on to a raft and thence raising them to the quay by a crane. This was a further reason for preferring simple splints, for if the splints were very large and complicated, prompt unloading was difficult.

A base consultant surgeon expressed a belief that the Thomas knee splint in ordinary cases and the Thomas abduction frame in high-up cases were greatly preferable to all others. If freedom of movement were desired it could be secured by suspending the end of the splint from the ceiling. But in the early stages, at any rate, all movement was undesirable, the constitutional shock in these cases being very great. Cases in which large incisions had been made did b st.

Major ROBERT JONES said that those who, like himself, did their war work at home hospitals, did not, perhaps, fully appreciate the difficulties with which M.O.'s at the front had to contend. In the circumstances the results obtained seemed to him splendid. Some years ago, when the Manchester Ship Canal was being constructed, he had often had to deal with injuries which closely resembled shell wounds and found it a great advantage to dispense with the use of anaesthetics. They were not so essential in such cases as was sometimes thought, for sufferers from serious injuries did not feel a great deal of pain. When amputation had to be performed the modified circular incision should be preferred and the skin drawn back as far as it possibly could be, in order to secure a stump to which an artificial limb could easily be fitted. In fractures of the upper third, abduction of the limb was essential; unless the thigh were kept well out the result could not be satisfactory. During transport the abduction could be temporarily disused. Most of the splints he had so far seen were modifications of the Thomas.

The proceedings then concluded after a few observations from Mr. LYNN THOMAS and other visitors and the adoption of a vote of thanks to the officers of the Australian Hospital, on the proposal of Surgeon-General SAWYER.

NEUROLOGICAL NOTES.

IN a paper written at the request of the Medical Society of Berlin,[1] Hermann Oppenheim stated that he hardly ever saw a quite recent lesion of the nervous system incurred in the fighting line.

Brain.

He was greatly surprised by the rarity of late abscess after lesions of the brain, and he disagreed with Marburg's statement that abscess was an inevitable sequel to a wound of the brain in which the bullet remained. The following features of brain lesions were of special interest: (1) In many cases the severity of the wound was seemingly out of all proportion to the insignificance of the symptoms, notably the local symptoms. (2) On the other hand, in certain cases in which the bullet had injured a number of centres and paths of conduction in its course through the brain, the number and variety of the local symptoms were most striking. (3) Cortical symptoms were most prominent when the wounds of the head were tangential and superficial. (4) The number of cases in which the symptoms were bilateral was very great. One of the most striking phenomena was cerebral cortical paraplegia While the motor symptoms seemed to follow definite laws, the behaviour of the sensory symptoms was apparently erratic. (5) The complex variations in the visual symptoms could be traced to the great number of points in the brain at which the optical connexions and centres could be wounded. Among the rare forms of central optical disturbances was hemianopsia inferior, which he had not seen before. (6) Many cases presented cerebral and labyrinthine symptoms, which pointed to a lesion far from the site of the bullet wound. In many instances this paradox could be explained by the presence of extensive fissures of the skull. There seemed to be a form of nystagmus independent of any lesion of the cerebellum and its connexions. (7) The proportion of recoveries was extraordinarily high, and many a patient had been sent back to the front. (8) In not a small proportion of cases organic lesions were combined with functional disturbances.

[1] *Berl. klin. Woch.*, November 8th, 1915.

Cord.

The most common sequel to bullet wound of the cord was localized necrosis, which was much more frequent than haemorrhage into the cord. A by no means rare condition, though it had scarcely been previously observed as a sequel to injury to the cord in war, was Brown-Séquard's paralysis with homolateral anaesthesia. This condition was probably due to a bullet having struck chiefly the motor fibres on one side of the cord and the sensory fibres on the other. Most of the lesions of the cord were transverse, but in a few the projectile passed longitudinally, wounding the cord for a considerable distance. Lesions in the cervical region were often combined with injury to the plexus, which greatly diminished the prospects of successful operation. In a few cases the injury to the cord was so slight that the only evidence of its involvement was Babinski's sign, paraesthesia of the area supplied by the ulnar nerve, or disappearance of the tendon reflexes of one leg. The prognosis was often excellent when the division of the cord was only partial.

Peripheral Nerves.

Not infrequently the only sequel to a bullet wound of a peripheral nerve, such as the median, was a combination of sensory with vasomotor and secretory disturbances. In some wounds of the sciatic nerve only the sensory fibres had been cut, and in other cases only the motor. All the muscles supplied by an injured nerve were not invariably paralysed to an equal degree. Thus, the extensor communis digitorum was the muscle to suffer most when the radial nerve was injured, the flexors of the index finger when the median nerve was injured, and the deltoid when the plexus was injured. It had also been noticed that the nerve supply of muscles was subject to great variations. Thus the muscles of the ball of the thumb were found to be more often supplied by twigs from the ulnar nerve than had hitherto been realized. It was also found that the pronator teres was not invariably supplied by the median nerve. Many new observations were also made in connexion with traumatic neuritis, especially with reference to the dependence of pain on a variety of stimuli. Thus every sound, every sudden optical stimulus, or every psychic insult might be enough to provoke an attack of pain. Among the trophic disturbances closely studied for the first time was traumatic hypertrichosis. The experiences of the war had done much to discredit Charcot's teaching as to the psychogenetic origin of the symptoms to which the term traumatic hysteria had been given. To assume that non-organic paralyses and sensory disturbances were due to the imagination was erroneous; and though it could not be denied that psychic insults could produce serious non-organic changes in the central nervous system, yet it was a mistake to regard the symptoms as hysterical; they were due to mental strain. The war had shown that mechanical insults were largely responsible for non-organic nervous lesions, and that psychic and physical shock acted in the same manner on the central nervous system. In the case of shell explosions, these two factors were inextricably combined.

Traumatic Neurasthenia.

A common accompaniment to traumatic neurasthenia was a slight rise of temperature. Symptoms of hyperthyroidism were also frequently observed, and not a few

patients suffered from tachycardia, hyperidrosis, and tremor, and presented Graefe's and Chvostek's signs. Many cases of akinesia amnestica and of reflex paralysis, which had been wrongly labelled as "local traumatic hysteria," were observed. The relatively low vitality of the right hemisphere of the brain was shown by the enormous excess of left-sided over right-sided symptoms. In attempting to distinguish genuine paralysis from psychogenetic or simulated paralysis it had been customary to divert the patient's attention, and to place the limb in a position in which it could only be maintained by muscular action. When the limb did not collapse instantly the genuineness of the paralysis was discredited; this was quite wrong. It had been repeatedly found that, though the patient could not bring his limb into a certain position without help, he could keep it there. Thus, in a case of genuine radial palsy, the patient could not extend his hand, but when it had been passively extended he could keep it in that position. When he attempted active extension, the antagonistic muscles were thrown into action.

CASUALTIES IN THE MEDICAL SERVICES.

Died on Service.

Brevet Colonel Arthur Henry Moorhead, Bengal Medical Service, died at Kyrle, Batheaston, on March 1st, aged 43. He was born on July 20th, 1872, the third son of Brigade Surgeon G. A. Moorhead, R.A.M.C., and educated at Edinburgh University, where he took the M.B., C.M. in 1893. Entering the I.M.S. as surgeon-lieutenant on July 28th, 1894, he became surgeon-captain on July 28th, 1897, major on July 28th, 1906, and lieutenant-colonel on July 28th, 1914, and was promoted to brevet colonel for services in the present war on February 18th, 1915. He had served in three campaigns on the North-West frontier of India: Waziristan, 1894–95, medal and clasp; Chitral, 1895, in the relief of Chitral, medal with clasp; and in the Tochi Valley in 1897–98, clasp; also in the third China war of 1900, in the relief of Peking, medal with clasp. Since 1901 he had been medical officer of the 16th Indian Cavalry. He went to France with the second cavalry division of the Indian contingent, in command of a field ambulance, was mentioned in dispatches, promoted to brevet colonel, and made an assistant director of medical services. He was invalided home last December. In 1908 he represented the Indian Government at the Plague Conference in America, where he read a paper. His eldest brother, Lieutenant-Colonel G. O. Moorhead, is commanding officer of the Nyasaland contingent of the Union Expeditionary Force, East Africa.

Captain Harry John Rutherford Jones, R.A.M.C., died at 139, Oakwood Court, Kensington, on February 26th, aged 40. He was educated at the London Hospital, and took the M.R.C.S. and L.R.C.P.Lond. in 1892. After acting as house-surgeon to the Poplar Hospital for Accidents, he went into practice in Kensington. He took a temporary commission as lieutenant in the R.A.M.C. on August 15th, 1914, and was promoted to captain on completion of a year's service.

Captain William Howard Nicholls, R.A.M.C., died of an accidental gunshot wound in India on February 22nd, aged 24. He was the son of Howard Nicholls, of Bramber Lodge, West Worthing, was educated at Guy's, and took the M.R.C.S. and L.R.C.P.Lond. in 1914. He joined the Special Reserve of the R.A.M.C. as lieutenant on October 19th, 1914, and was promoted to captain after a year's service.

Lieutenant William Williamson Kerr Duncan, R.A.M.C., died at Willow Bank, Grantown-on-Spey, on February 29th, aged 37. He was the son of the late Rev. Henry Duncan, of Crichton. He took the Scottish triple qualification in 1914, and had only recently taken a temporary commission in the R.A.M.C.

Miss Christina Murdoch Wilson, Queen Alexandra's Imperial Military Nursing Service, Reserve, daughter of the late Thomas Wilson of Glasgow, died of pneumonia at No. 14 General Hospital, Wimereux, France, on March 1st.

Miss A. B. Corfield, Staff Nurse, Q.A.I.M.N.S. Reserve, is reported in the casualty list published on March 4th as having died in Egypt.

Wounded.

Captain H. Shield, R.A.M.C.(T.F.), France.
Captain C. E. C. Cole, Canadian A.M.C., France.
Lieutenant H. O. Gough, R.A.M.C. (temporary), France.
Assistant Surgeon E. J. Fisher, I.S.M.D., Mesopotamia.

Lost at Sea.

The P. and O. ss. *Maloja*, 12,431 tons, Captain Irving, R.N.R., which left London for the East on Saturday, February 26th, was struck by a mine or torpedo off Dover on the morning of Sunday the 27th, and sank in half an hour with the loss of over 150 lives. She was the largest, but not the newest, of the P. and O. boats. Of 456 persons on board 155 appear to have been lost—namely, passengers, 72 saved, 49 lost, total 121; European staff, 92 saved, 20 lost, total 112; Lascar crew, 137 saved, 86 lost, total 223. The ship's surgeon, Dr. Edgar Kennington (Bart's), was among those saved. Two medical men were among the passengers, Dr. W. K. Miley and Assistant Surgeon W. J. S. Maine; both were lost.

Dr. William Kildare Miley was educated in the school of the Royal College of Surgeons in Ireland, Dublin, and took the diplomas of L.R.C.S.I. and L.R.C.P.I. in 1877, also taking the M.R.C.P.I. in 1880. He then joined the colonial emigration service, in which he had risen to be the senior medical officer, and was on his way to Calcutta to take medical charge of a shipload of emigrants for the colonies. He was a brother of Colonel Miley of the Indian army, resided at Monkstown, co. Dublin, and was 63 years of age.

Assistant Surgeon William John Samuel Maine, of the Indian Subordinate Medical Department (Bombay), was born on December 12th, 1864, attained warrant rank on September 14th, 1887, and became first class assistant surgeon on September 15th, 1906. He had recently been serving with the Indian troops in Europe, and received the Military Cross for his services on January 14th, 1916.

Deaths among Sons of Medical Men.

Christie, Dugald R., Second Lieutenant Royal Field Artillery, son of Dr. Dugald Christie, C.M.G., Principal of the Moukden Medical College, Manchuria, killed in action in Mesopotamia, on February 24th, aged 19. He got his commission as second lieutenant in the R.F.A. on March 24th, 1915.

Jalland, Stephen, Lieutenant 6th East Yorks Regiment, now reported killed in action on August 9th, 1915, at Chocolate Hill, Gallipoli, was the youngest son of Mr. and Mrs. Jalland, of York. He was educated at Bilton Grange, Uppingham, and Lincoln College, Oxford, and graduated in honours in the Natural Science Schools, and eventually took the degree of M.A. Soon after war was declared he obtained a commission in the 6th East Yorks Regiment, having previously been in the Oxford O.T.C.

Ramsay, Derrick Winson, Lieutenant 10th Battalion Sherwood Foresters, eldest son of Dr. F. Winson Ramsay, of Jesmond Dene, Bournemouth, killed in France on February 14th. He was educated at Sherborne, and was studying engineering at Durham University College of Science, Newcastle, when the war began. He got a commission as second lieutenant on September 17th, 1914, and was promoted to lieutenant a year later.

Robinson, Arthur Limnel, Second Lieutenant Royal Engineers, eldest son of the late Surgeon-Major Mark Robinson, I.M.S., died in France on February 25th of wounds received on February 17th, aged 34. He was born at Mercara, Coorg, Southern India, on July 18th, 1881, educated at Dover College and the Royal School of Mines, and subsequently held appointments in Siberia, the Malay States, and Northern Nigeria. He was invalided from Africa in March, 1915, and on recovery got a commission in the Northamptonshire Regiment. After training at St. Albans and Colchester, he went to the front on November 1st, 1915, and was posted to the 173rd Tunnelling Company, R.E. He had only recently been home on leave.

Wood, Eric A. W., Second Lieutenant 9th Battalion Duke of Wellington's Regiment, eldest son of Dr. Arthur Wood, of Woodroyd, Southport, and of Halifax, killed in France on February 25th, aged 20. He was educated at Haileybury, and was about to go to Oxford when the war began. His commission was dated January 7th, 1915.

Medical Student.

Layman, Douglas Arthur Campbell, Second Lieutenant 17th Battalion Lancashire Fusiliers, elder son of Arthur Layman, of 4, Dulwich Wood Park, Upper Norwood, died of wounds in France on February 22nd, aged 22. He was a grandson of Dr. William Papineau, was educated at Dulwich College, where he was in the O.T.C., and then joined St. Thomas's Hospital. From October, 1914, he served as a dresser on the Indian hospital ship *Glengorm Castle* till August, 1915, and got his commission in September, 1915.

NOTES.

HONOURS.

SENIOR SUB-ASSISTANT-SURGEON T. N. SWAMI NADHA NAIDU, of the Indian Subordinate Medical Department, now serving at Bushire, has been awarded the Distinguished Service Medal for conspicuous courage and gallantry in action in Mesopotamia. Previous to the war he was in submedical charge of the 86th Carnatic Infantry at St. Thomas's Mount, Madras.

The *London Gazette* of March 3rd announces that the King has been pleased to confer the Order of the Royal Red Cross, second class, upon the following ladies, for services under the Belgian Red Cross in Flanders, between August and November, 1914: Miss C. E. A. Thorpe, matron; the Hon. Angela Manners, sister (organiser of the "Manners Ambulance.")

MEDICAL OFFICERS WANTED.

2/1st South Midland Mounted Brigade.

Three medical officers are wanted to complete Brigade at present on East Coast. Applications to Major D. M. Spring, S.M.O., R.A.M.C.(T.), Head Quarters, Hempton, Fakenham, Norfolk.

Ireland.

IT was reported at the annual meeting of the St. Patrick's Home for Supplying Trained Nurses to the Sick Poor in Dublin that, owing to the decreased poverty, due mainly to the separation allowances, the health of the poor had been good, and the number of cases nursed had decreased during the year 1915. The nurses, however, had visited 34,640 cases. Much good work was done in giving mothers instruction in the care and management of children.

A hospital ship arrived at Dublin on February 27th with 620 wounded and sick soldiers, of whom 290 were cot cases. The proportion of medical cases, such as acute rheumatism, pleurisy and pneumonia, and trench nephritis was large. Two ambulance trains, each conveying 150 men, were sent to Cork and Belfast respectively. The remainder were distributed among the Dublin hospitals. The St. John Ambulance Brigade furnished 160 men for the stretcher work at the North Wall Extension and at the hospitals; 56 motor owners lent, and in many cases drove their cars, while the Irish Automobile Club provided 20 ambulances, and traders 7 vans temporarily converted. The ambulances of the Dublin Corporation and the Pembroke Council were also at work, and the transfer of all the soldiers was accomplished in about three hours.

Reference was made recently to cases in which two boards of guardians had cancelled appointments made by them of locumtenents nominated by their medical officers when joining the Royal Army Medical Corps. One of these has now been adjusted—the guardians of Delvin, co. Westmeath, having agreed, after considering letters from the medical officer concerned and Dr. M. R. J. Hayes, secretary of the Irish Medical War Committee, to re-elect the locumtenent nominated by the absent doctor. In the other case the Local Government Board has addressed a letter to the guardians of the Lisnaskea Union, stating that it is not prepared without the concurrence of the absent doctor to entertain the proposal of the guardians under which an essential part of the arrangement made with the absent doctor, to whom the guardians had granted leave of absence for twelve months, would be upset by the displacement of the locumtenent nominated by him. The consideration of the communication from the Local Government Board was postponed for a larger meeting of the guardians.

INDUSTRIAL TRAINING OF WOUNDED SOLDIERS.

The large dépôt for wounded soldiers from various Irish regiments at Tipperary is affording instruction to men discharged from hospital. About 1,500 have already been admitted, and 2,000 more will be sent there in time. All men who are fit undergo a course of physical exercise and military training, and it is hoped that a good proportion of them will shortly be ready to return to full or partial duty. Manual instruction classes in boot repairing, French polishing, motor driving and repairing, in stationary oil and gas engines used for farm or other work, and shorthand and typewriting have already been established. It is also proposed to give classes in the management and fixing of telephones, painting, ironwork, etc. Gymnastic exercises, massage, radiant heat baths, and Swedish drill greatly assist in accelerating recovery. Members of the Almeric Paget Massage Corps are on duty under the direction of the medical officer in charge. All this work is the result of purely voluntary effort. The army authorities lent it their approval and take an interest in its success, but it is entirely financed by voluntary subscriptions and managed by a lay committee, of which the Commandant Colonel Gordon, C.I.E., and medical officer in charge Lieutenant-Colonel Sims Woodhead, R.A.M.C., are *ex officio* members.

THE RESEARCH DEFENCE SOCIETY.

The Dublin branch of the Research Defence Society, which has been in existence for seven years, held its annual meeting last week at the house of the Royal Dublin Society. The report stated that the subscriptions by the branch had decreased, partly by reason of the war, with its many claims, but for the most part because members and the public considered that the battle for truth was already won. But although members could congratulate themselves on a great victory, the fruits of which were seen in the many thousands of soldiers saved from death by the results of medical research, no victory was eternally won unless it was eternally fought for. It was suggested that all members should subscribe for the quarterly report, which contained information as to the general affairs of the society and its many branches and as to current medical research. The branch had made a contribution to the parent society and had a small balance in hand. Sir Frederick W. Moore, who presided, said that the society had been assailed by all sorts of calumnies, and in particular it had been alleged that its one object was the torture of animals. There was not in the society a single member who would countenance the infliction of the slightest unnecessary suffering on any animal, or any experiment not likely to help to alleviate the suffering man was heir to.

Dr. A. D. Waller, F.R.S., Director of the Physiological Laboratory of the University of London, then delivered an address on fat consumption during war. He pointed out that a dominant factor in the German economic situation was the amount of fat available for food and for explosives. A hundred tons of fat yielded about ten tons of glycerine, which could be nitrated to yield twenty tons of nitroglycerine. Germany has hitherto consumed fat at the rate of 106 grams per head—that is, in round numbers, 2½ million tons per annum. For industrial purposes Germany has used half a million tons, of which 100,000 tons went to nitroglycerine. Half has been grown at home, half has been imported. During the first year of the war Germany had required for food at least half her previous allowance—that was to say, at least one and a quarter million tons of fat, and, say, 350,000 tons for war explosives; she had not been able to produce this amount at home. She had imported it partly from or through neutral countries, and partly from occupied territory. Germany had taken fat from the food account for the explosives account, and was therefore starving her women. There was no excuse, he said, for allowing fat, oils and substances which went to the formation of nitroglycerine to enter Germany.

Scotland.

AT a meeting of the curators of the University of Edinburgh on March 3rd a resolution of sympathy with the members of the family of Sir William Turner was adopted. After a discussion it was decided to adjourn the question of the appointment to the vacant principalship for a few weeks.

The directors of the Royal Blind Asylum and School, Edinburgh, have secured Newington House in Blacket Avenue, with several acres of ground, for the purpose of carrying out the institution's scheme for sailors and soldiers blinded in the war. The Scottish Education Department have agreed to recognize the institution as a centre for the training of blind junior students.

CRIPPLED AND MAIMED SOLDIERS AND SAILORS.

A conference of representatives of municipal and other bodies interested in working the Naval and Military

Pensions Act, 1915, was held in the City Chambers, Glasgow, on February 28th, to consider the model scheme drawn up by the Statutory Committee established under the Act for the constitution of the local committees. A meeting has also been held in Edinburgh. Meanwhile a scheme for the establishment in the West of Scotland of a hospital for limbless sailors and soldiers is making progress. At present the only hospital of the kind is Queen Mary's Auxiliary Hospital at Roehampton. A deputation, headed by the Lord Provost of Glasgow and Sir William Macewen, had interviews on March 3rd with the Director-General of the Army Medical Service at the War Office, and at the Admiralty with the Committee of the Roehampton Hospital, with Major-General Sir Francis Lloyd in the chair. Sir Alfred Keogh gave the deputation the assurance that the hospital proposed to be established in Scotland would enjoy the same privileges with regard to grants, etc., and receive the same recognition from the military authorities as the hospital at Roehampton, and added that there was all the more need for the establishment of a hospital in the West of Scotland in that the accommodation at Roehampton was overtaxed; something like 1,600 were awaiting admission. Similar assurances were received at the meeting at the Admiralty. The deputation afterwards visited the hospital at Roehampton. It is stated that the Provisional Committee, of which the Lord Provost of Glasgow is chairman, will now take practical steps to carry out the scheme.

England and Wales.

AT the annual meeting of the Ancoats Hospital, Manchester, on February 27th, the chairman, Sir F. Cawley, M.P., said that, in common with other institutions, its expenditure had increased. A larger income was necessary, but it was a remarkable fact that the annual subscriptions were only about £12 less than previously, showing that the public recognized the great value of the hospital. As all the members of the honorary staff had accepted commissions in the army and six out of nine Sisters had taken up military duties, the work of the hospital had been carried out under great difficulties. The number of in-patients had been 1,816, out-patients 7,026, home patients 445, and accident cases 18,156. Up to the end of December last 165 wounded and sick soldiers had been admitted to the hospital and 325 received at the convalescent home at Warford, where there were 37 beds. At the end of the meeting those present had the opportunity of inspecting the wards and the extensions, which include new out-patient consulting-rooms.

THE MANCHESTER CHILD WELFARE SCHEME.

The Manchester City Council has taken an important step in the direction of extending the municipal scheme for child welfare. Owing to the war the Slade Lane Babies' Hospital, which belongs to the committee of the Manchester School for Mothers, has suffered financially to a serious extent, and there was some danger that it might be closed if it had to depend altogether on voluntary effort. The committee therefore offered to the corporation 18 beds in its hospital for babies, and while the Sanitary Committee would have accepted the offer, opposition came from the Finance Committee, which resolved to recommend the Council not to accept it. It appears that the proposal involved that the corporation should be responsible for one-half of the cost of upkeep of the beds; and though under the child welfare scheme the Local Government Board would in all probability have provided half, the cost to the corporation would be at least £350 a year. When the question came before the Council the chairman of the Sanitary Committee pointed out that the objection of the Finance Committee was really that there was already sufficient provision for these cases made by other Manchester hospitals, and, though he partly admitted this, the provision was rather for cases requiring only short periods of treatment, the average stay in the other hospitals being only about three weeks, whereas many of the children under consideration required upwards of twelve months' treatment in order that cure might be effected. Sir Charles Behrens said that at the Manchester Infirmary there were now 580 persons awaiting admission, and there were no cots available for babies. Several members of the Council opposed the proposal, which was represented as being a beginning of the municipalization of the hospitals, and it was argued that other hospitals had an equal or even better claim to rate aid. The Council, however, accepted the offer of the School for Mothers by a large majority. The medical side of the school has already been taken over by the corporation.

Correspondence.

THE EFFECT OF POSITION IN AUSCULTATION OF THE HEART.

SIR,—I was very glad to read Lieutenant-Colonel Rudolf's letter in the JOURNAL of March 4th, pp. 361-2. His results are the same as those to which I have drawn attention in teaching now for some years; and in the same issue of the JOURNAL, on p. 359, in a brief record of the transactions of the Ulster Medical Society, mention is made of a short paper I read on this subject. The phenomena, however, are frequently observed; a patient with some infection—too much alcohol and tobacco are sufficient—develops both apical and basic murmurs; the patient is put to bed and the cause removed, and in time, short or long, days or weeks, the murmurs disappear. The explanation is obvious. But also the following is found: A man is examined for life assurance, and no murmur, or one very faint, scarcely detectable, is found; he is put on his back, and a distinct systolic murmur promptly appears, generally in the fourth space, but sometimes at apex or at base. The explanation here is not so easy. I saw a certificate in regard to an officer home from India from the late Sir William Broadbent, in which it was stated as his opinion that the murmur was not organic but functional, and that probably the phenomenon was due to want of muscle tone, so that the heart in the supine position slightly flattened itself against the vertebral column in the supine position, like an india-rubber ball that had lost its elasticity. For my own practice and guidance I have looked upon its presence as indicating want of tone, and not sufficient to reject a life under average circumstances or to debar from the services, but as an indication for stopping sudden sharp strains of the heart, as in that involved by a sedentary clerk joining the colours without some preliminary training and observation. Colonel Rudolf's advice to examine the patient in both positions and after exercise is sound.—I am, etc.,

Belfast, March 4th. WILLIAM CALWELL, M.D.

THE SOLDIER'S HEART AND THE STRAINED HEART.

SIR,—I see that Dr. J. S. Manson (January 29th, p. 184) ascribes some of the cases of irritable heart to tobacco smoking. A piece of experience which came my way supports his view.

On the hospital ship *Asturias* were always a number of invalid hearts variously described as irritable valvular disease of the heart and deranged action, all of them having their fingers stained a deep mahogany brown from cigarette smoking. Colonel Hardy, R.A.M.C., examined and tabulated these cases, and wrote a report on them which was sent to the Director-General at G.H.Q., and was thought to be of sufficient importance to call for a report from his office, which amounted to a warning against the excessive use of cigarettes then prevailing in the army.

This question of cigarette smoking will probably be seriously considered one of these days because of the number of men who will be invalided with tobacco hearts, called possibly by other names, all of whom will claim pensions as having been injured by war service. There is, I believe, no place where an attempt is being made to-day to separate the truly irritable heart from the heart which is merely irritable for the time being.

I have also a piece of evidence in favour of Sir James Goodhart's view that the irritable heart is, at any rate in many cases, our old friend the overdone heart masquerading under another name. During the past eighteen years it has been my custom at Cambridge to ask every patient whether and when he had had any trouble with

his heart, and who was his doctor. The evidence thus obtained showed that a large percentage of these irritable ineffective hearts dated back to the fourteenth to sixteenth year, when as boys at school they were in an athletic team struggling for pre-eminence—a struggle which the patient still looks on as being one of the toughest jobs he had ever had a hand in. The history, with the doctor's description, showed that the onset was gradual, although the realization of it by the patient was sudden. The irritable heart of the young man was the hypertrophied overdone heart of the boy.

We have still to find out whether the irritable hearts are all included in the classes roughly sketched in this letter, or whether the irritable heart of the soldier on active service is starting in him although he is nearer to his full development than these patients usually are. Then we shall have to find out what the truly irritable heart is.—I am, etc.,

ROBERT MICHELL,
March 8th. Captain (temporary) R.A.M.C.

FERGUS(S)ON'S SPECULUM.

SIR,—Although the four men to whom this instrument has been ascribed were all contemporaries of many doctors still living, several correspondents who have read "Gynaecologist's" query in the JOURNAL of January 8th admit that the question remains unsettled.

"Fergus(s)on's vaginal speculum" means a tubular glass instrument, silvered and coated with rubber. The four men for whom it has been claimed are: (1) Dr. Robert Ferguson (1799–1865), Physician-Accoucheur to Queen Victoria, and the first professor of obstetric medicine and diseases of women and children to King's College. Several living contemporaries are under the impression that he was the inventor, but he makes no mention of the instrument in his *Essays on the Most Important Diseases of Women*, nor in his edition of Gooch's works. (2) Ferguson, a dealer whose shop close to the entrance to St. Bartholomew's Hospital was well known in the middle of the last century. His claim, as will be shown, is strong. (3) Sir William Fergusson, Bt. (1808–1877), who makes no mention of the speculum in his *System of Practical Surgery*, nor, I understand, in any of his other writings. He received his baronetcy in January, 1866—a point of some importance in this controversy. (4) Dr. W. E. Laing Fergusson, M.R.C.S.Eng. 1846, M.D.Glasg. 1854, who died in 1880.[1] I understood from Dr. Greenhalgh, under whom I studied in 1869–70 at St. Bartholomew's Hospital, that this Dr. Fergusson, who had just settled in Claremont Square, originally suggested this instrument.

The evidence from contemporary textbooks is conflicting. In the first edition (1835) of Churchill's *Diseases of Women* the instrument is not mentioned, but in the third edition (1850) it is described in a paragraph beginning "Dr. Fergusson (*sic*) has greatly improved . . .," whilst in the fourth (1857) the same paragraph reads: "Mr. Ferguson has greatly improved . . ." We may conclude that the spelling was corrected in the later edition. No Dr. Fergusson was known to obstetricians in 1850, and in 1857 the future baronet was Mr. Fergusson. In Mitchell's *Practical Remarks on the Use of the Speculum* (Dublin, 1849) and in Robert Lee's *Treatise on the Employment of the Speculum* (1858) there is no mention of a Ferguson's speculum, but Mitchell mentions a plain glass conical speculum covered with caoutchouc.

The evidence of makers, dealers, and catalogues must be taken into account. Messrs. Maw, Son and Sons have kindly informed me that they have listed "Fergusson's speculum" in their catalogues since 1851, and were always under the impression that Sir William was its inventor, but add that "we note that in an 1851 catalogue we spell the name with only one *s*." Mr. Barry Hopkins of Messrs. Arnold and Sons, a veteran in the trade, states that Dr. Ferguson of King's College was believed by many dealers to be the inventor, but, like Messrs. Maw, he notes that all concerned with the speculum when it was new—glass-blowers, silverers, and india-rubber workers included—have passed away and left no record.

I find, however, evidence of real weight in the *Catalogue of Obstetrical and other Instruments exhibited at the Conversazione of the Obstetrical Society of London, held by Permission at the Royal College of Physicians, March 28th, 1866*, a valuable descriptive work on which is founded the catalogue of the loan collection of obstetrical and gynaecological instruments in the Museum of the College of Surgeons. At page 200 the speculum is thus described:

> Ferguson's glass speculum coated over with a thin layer of india-rubber. This instrument is a very useful one, possessing great reflecting power, and capable of always being kept perfectly clean and bright for ordinary use; Dr. Churchill has found this speculum (of different sizes) the most useful.

This catalogue was published early in 1867, the editor dating his preface December, 1866. Sir W. Fergusson received his baronetcy in January, 1866, and the conversazione was held in the following March. In the notes on specula in the *Catalogue* "Dr." is placed before the names of all well-known medical inventors, Dr. Henry Bennet's, Dr. Marion Sims's, Dr. Tanner's, and other specula being fully described. Turning to dealers, I find at p. 202 "Hilliard's exhibited by Ferguson" (Hilliard being a Glasgow firm), "A speculum was exhibited by Durroch," then a dealer in St. Thomas's Street, S.E. It is true that it is stated that "*Mr.* Ferguson exhibited two vaginal retractors"—though the exhibitor must have been the dealer, not the baronet. Dr. Robert Ferguson had died in 1865, and was spoken of as "Dr." in Sir T. Watson's address at the Royal College of Physicians,[2] delivered three days before the conversazione. Sir W. Fergusson's newly acquired title could not have been overlooked, while Dr. Laing Fergusson had not come to London, indeed his name is not to be found in the *Medical Directory* for 1866, though he had qualified twenty years earlier, and it was not until 1870 that his address was given as Claremont Square, N. Thus the evidence of this descriptive catalogue must lead us to believe that Ferguson the dealer was the inventor. Perhaps, however, some reader of the JOURNAL may possess further evidence about the speculum and its inventor.—I am, etc.,

London, W., Feb. 2nd. ALBAN DORAN.

VISUAL NEUROSES OF MINERS.

SIR,—Dr. C. F. Harford (JOURNAL, March 4th, p. 340) writes: "The name (miner's nystagmus) seems to be unfortunate."

I agree with him, but I doubt if it is going to help us to call it a "neurosis." In 200 consecutive cases of nystagmus collected in a coal-mining area only 12 per cent. were miners. If we call the 12 per cent. neuroses of miners, what are we to call the others when the manifestations in all the cases are practically identical?

In Dr. Harford's series of miners ametropia is the rule, but the same is true of non-miners. "Nystagmus occurring in a miner" is probably a better term than neuroses of miners.—I am, etc.,

Warrington, Mar. 7th. J. A. WILSON.

TRENCH NEPHRITIS.

SIR,—Your annotation on this subject suggests that the theory of an infective origin for trench nephritis has only just been put forward. Claims for priority are seldom edifying, and it is with some reluctance that I venture to point out that this view was definitely advanced by me in the July issue of the *Journal of the Royal Army Medical Corps* (which was not published till September). I advocated the view as the result of work undertaken at the request of the Medical Research Committee, with the co-operation of Mr. Mackenzie Wallis and Mr. J. W. Trevan. I enclose a copy of my interim report, in which you will find practically all the points referred to in your annotation, such as the association of dyspnoea with the oedema, and the immunity of the Indian troops from the disease, as well as the extensive chemical and bacteriological investigations on which we based the infective theory.—I am, etc.,

London, W., March 4th. W. LANGDON BROWN.

*** The annotation mentioned by our correspondent begins with a reference to the discussion at the meeting of the Sections of Medicine, and Pharmacology and Therapeutics of the Royal Society of Medicine on February 19th. In opening that discussion Dr. Langdon Brown, as was reported at p. 278, indicated reasons for believing that the disorder was due to an infection.

[1] BRITISH MEDICAL JOURNAL, vol. i, 1880, p. 679.

[2] BRITISH MEDICAL JOURNAL, vol. i, 1866, p. 338.

Obituary.

R. D. MAXWELL, M.D., F.R.C.S.,

ASSISTANT OBSTETRIC PHYSICIAN, LONDON HOSPITAL.

WE regret to have to record the death, on March 6th, after an abdominal operation, of Dr. R. Drummond Maxwell. He was the son of Mr. Richard Maxwell, of Oxford Gardens, W., and received his professional education at the London Hospital; he graduated M.B.Lond. in 1897 and M.D. (in Gynaecology and Obstetrics) in 1904; he became F.R.C.S.Eng. in 1907. He took part in the Boer war as civil surgeon in the South African Field Force. He was for a time resident medical officer in Queen Charlotte's Lying-in Hospital, to which he was afterwards elected physician. Dr. Maxwell afterwards joined the staff of the Samaritan Hospital, where, as physician to out-patients, with some beds at his disposal, he distinguished himself greatly both for sound clinical knowledge and skilful operating. After a few years he was elected assistant obstetric physician and lecturer on midwifery to nurses at his old hospital. Dr. Maxwell communicated to medical societies and journals many excellent original memoirs, and when the late Dr. Herman was nearing the end of his career, that distinguished authority handed over his deservedly popular *Diseases of Women* to his younger colleague for the preparation of a new edition.

A Colleague at the London Hospital writes:

Of Maxwell's ability there is little need to speak; his academic distinctions, the position he had already attained in his profession, the success which had already come to him are surely sufficient testimony. Great though his professional attributes were, it is for other and still rarer gifts that those who knew him will continue to mourn for him and to dwell upon his memory. A wide and generous sympathy for all suffering, a detestation of cant and a passionate love of justice were mingled in his character with a natural geniality and a deep appreciation of the drama, poetry, and humour of life. The quiet courage with which during the last few years he had faced two serious abdominal operations was not lost on his friends. Maxwell, I believe, was never known to complain. Another striking feature was the interest he always evinced in military matters, a fact perhaps to be explained by his descent from a Scottish Border family. He had seen active service in the South African war, and for the last twelve months he was in command of the London Hospital Section of the University Officers' Training Corps. Nothing, however, compensated for the disappointment which he felt that owing to various substantial reasons he could not join our Expeditionary Force in France, for, like many of his countrymen, he had a strong sentimental regard for Scotland's ancient ally, and was strangely familiar with some of the more romantic chapters in her history. Such a man could not fail to be popular with both colleagues and students, and the widespread grief with which the news of his death was received bore remarkable testimony to the respect and affection in which he was held.

SAMUEL MACVIE, M.B., C.M.EDIN., J.P.,

CHIRNSIDE, BERWICKSHIRE.

THE death, on March 2nd, of Dr. Samuel Macvie, at his residence of Herbertknowe, Chirnside, has removed a successful doctor and an outstanding and most interesting personality from the Border district of Scotland. He was in his 68th year. He was a native of Irvine, in Ayrshire. His circumstances in his early years in a coal mining district in the West of Scotland made it no easy task for him to enter the medical profession, and he used to tell with pardonable pride how he was set upon obtaining nothing less than a university degree and how he in consequence went back for a time to his work until he had made sufficient to carry him through the classes in Glasgow and Edinburgh. He graduated in Edinburgh (M.B., C.M.) in 1874, and for forty years (since 1876) he practised in Chirnside with a reputation extending far beyond Berwickshire. He was elected a Fellow of the Edinburgh Obstetrical Society in 1881 and of the Medico-Chirurgical Society in 1897. From time to time he exhibited specimens at the meetings of the former society and took part, often with great acumen mixed with sly humour, in the discussions on obstetrical matters; and it was no surprise to those who knew him best when the fellows made him a vice-president in the years 1900–01. His paper entitled "Mother *versus* child," was an extremely clever and carefully worked out comparison and contrast between the value of the life of the mother and that of her unborn child, in which he came to the conclusion that, whilst the mother has realized the potentialities of life, the unborn infant has a potential value which is equal to its extra-uterine life-expectancy, and which may never be realized. Dr. Macvie felt that he had reached an *impasse* in his reasoning and smilingly was ready to admit that there was probably a fallacy somewhere. He had many original ideas upon many medical and especially obstetrical subjects, and his revolutionary notions on diet he put to the test in his own person, with no disastrous results but with apparent benefit, to the no small surprise of some who feared other consequences. He was greatly interested in art, and nothing pleased him better, on one of his rare visits to Edinburgh, than to spend half an hour or an hour in contemplation of a great religious painting. He was also delighted with his discovery of a local poetess in the person of the authoress of *Whinblossom*. He was medical officer for three parishes in Berwickshire and J.P. for the county. He was awarded the Volunteer Decoration as surgeon-major of the 1st Volunteer Battalion King's Own Scottish Borderers. He was for many years president of the Berwickshire Liberal Committee, and he also served as chairman of the Chirnside Parish Council and School Board. He had a fresh and original mind on all subjects of interest, and no man could place an apparently illogical statement before his hearers in a more convincing manner. His humour can only be described by the expressive Scots word "pawky." He will long be remembered in the Border Counties for his kindness of heart and his thorough grasp of medicine in all its parts. His wife predeceased him several years ago.

DR. ARCHIBALD THOMSON CAMPBELL, whose death on February 22nd was briefly noticed in the JOURNAL of last week, was an active and energetic member of the British Medical Association, having been chairman of the Division, president of the Branch, a representative at Representative Meetings, and a member of the Organization Committee. After graduating in 1886 he made one or two voyages to the East as ship surgeon. He settled in the north-western district of Glasgow, where he speedily built up an extensive practice. He took a great interest in the Insurance Act, and his constant endeavour was to make its working as satisfactory as possible from the medical point of view. He was unanimously elected chairman of the Glasgow Panel Committee, a position he filled with much acceptance to all concerned. He was attached to the Home Hospital Reserve, was mobilized at the beginning of August, 1914, and was appointed to the military hospital at the garrison, Maryhill, with the rank of captain, and carried on the arduous work required by both his civil and military duties till he was stricken down about five months ago by his last illness. Of a bright and happy disposition, with a marked sense of humour, he was very popular with the members of the profession in Glasgow and the West of Scotland, and to all who knew him his death has caused a feeling of irreparable loss. He was largely instrumental in forming the Glasgow Medical Golf Club. He leaves a widow and three children of school age, for whom the greatest sympathy is felt. He was buried with military honours at the Western Necropolis, Glasgow.

DR. EDWARD BERDOE, who died on March 2nd, was born in London on March 7th, 1836, and was therefore within a few days of the completion of his 80th year. He was educated at Regent's Park College, and began the study of medicine at a comparatively late period of life. After going through the curriculum at the London Hospital he was admitted L.R.C.P.Edin. and L.S.A. in 1876; in the following year he obtained the diploma of M.R.C.S. He worked as a general practitioner in Hackney for forty years. He was an ardent student of Browning, and was one of the founders of the society bearing the name of the poet; he was a member of its committee till its dissolution

in 1894. He was the author of *Browning's Message to His Time* (1890), *The Browning Cyclopaedia* (1891), *Biographical and Historical Notes to Browning's Complete Works* (1894), *Browning and the Christian Faith* (1896), and a *Browning Primer* (1904), and editor of *Browning Studies* (1895). Dr. Berdoe was a strenuous opponent of the germ theory of disease and of the experimental method in research, and he preached his doctrine with considerable ingenuity of argument. His outlook, however, was coloured by prejudice, as is shown by his books, *St. Bernard's: The Romance of a Medical Student*, and the key to it, *Dying Scientifically*, both published under the pseudonym of "Aesculapius Scalpel" in 1883. In the preface to *Dying Scientifically* he declared that he loved his old hospital, in which he had passed some of the happiest years of his life, and was grateful for all the advantages it had given him; the bitterness with which he denounced it and all other hospitals, and the medical profession as a body, may therefore be charitably attributed to the proverbial frankness of the candid friend. He displayed the same spirit in the *Zoophilist*, of which he was editor. He assisted Miss Frances Power Cobbe in the compilation of her notorious *Nine Circles*, and when the suppressions and misrepresentations of that work were exposed he had to bear his share of the responsibility for them. There is no reason to doubt his sincerity, but this makes it all the more lamentable that a man of his unquestionable ability and high character should have allowed himself to be so carried away by fanaticism. Dr. Berdoe was the author of a popular work on the history of medicine, entitled *The Origin and Growth of the Healing Art*, which, though made untrustworthy here and there by his dislike of experiment, is a readable introduction to the subject.

DR. FREDERICK WILLIAM WRIGHT, who died at Haddenham, Bucks, on January 31st, in his 78th year, received his medical education at the University of Edinburgh. After taking the diplomas of M.R.C.S. and L.S.A. in 1862 he joined his cousin, Mr. S. W. Fearn, surgeon to the Derby General Infirmary. In 1877, in conjunction with several medical friends, and with the support of Mr. M. T. Bass, M.P., Mr. H. H. Bemrose, then Mayor of Derby, and others, he founded the Derbyshire Children's Hospital, which has grown steadily to its present high state of efficiency. Dr. Wright was a generous benefactor to the building fund, and in September, 1915, his portrait was presented to the hospital board. He was also the originator of the Derby Nomadic Club, a debating society which has continued in active life since 1868. Dr. Wright gave up practice in Derby in 1889 and went to Colorado, where, although he did not engage in professional work, he received the honorary degree of M.D. from the University of Denver. After returning to England he practised for some years at S. Godstone, Surrey. When he finally retired from practice he occupied himself with research in London and Liverpool. His unselfish character made him beloved and trusted by all with whom he was brought in contact, and his professional skill and kindliness of disposition made him very successful as a practitioner. Dr. Wright leaves one son, a surgeon in the Royal Navy.

DR. GEORGE VALENTINE, M.B., C.M.Glas., well known in Ayrshire as medical officer to the lighthouse-keepers on Ailsa Crag, died, aged 68, on February 15th in his home in Girvan, where he had been parochial medical officer for no less than forty-three years.

ALFRED BESWICK DARLING, M.B., Ch.B.Edin., D.P.H., died on February 20th in Edinburgh, where he had settled in practice after having held junior appointments in that city, and in Sheffield and Darlington. He graduated in 1906.

DR. GEORGE HENRY CHARLESWORTH, J.P., who died on February 8th, in Putney, aged 56, was the eldest son of Mr. Charlesworth of Syston, Leicestershire. He was educated at King's College and at Charing Cross Hospital. He was for many years district medical officer to the London County Council, and he was also honorary medical officer to the Actors' and Music Hall Artistes' Associations. Dr. Charlesworth died deeply lamented by a large circle of friends, many of whom honoured his memory by attendance at his funeral at Syston on February 14th.

LIEUTENANT-COLONEL THOMAS HENRY WHITE, R.A.M.C. (ret.), died at Coolgardie, Caversham, on January 27th, aged 78. He took the degree of M.D. in the Royal University, Ireland, in 1858, and the diploma of L.R.C.S.I. in 1859, and entered the army as assistant surgeon on January 19th, 1860, becoming surgeon on January 19th, 1872, and surgeon-major on March 1st, 1875; he retired as brigade-surgeon on February 5th, 1890. The *Army List* assigns him no war service.

LIEUTENANT-COLONEL GEORGE FREDERICK WILLIAM BRAIDE, Bengal Medical Service, died suddenly at Lahore on January 6th. He was born on November 5th, 1862, educated at Owens College, Manchester, and in 1886 graduated M.B.Vict. Univ., and took the diploma of M.R.C.S. He entered the I.M.S. as surgeon on March 31st, 1887, became major on March 31st, 1899, and lieutenant-colonel on March 31st, 1907, and was placed on the selected list for promotion on August 25th, 1912. For the last nine years he had been Inspector-General of Prisons in the Punjab. The *Army List* assigns him no war service.

DEATHS IN THE PROFESSION ABROAD.—Among the members of the medical profession in foreign countries who have recently died are Dr. Isaac Ott, professor of physiology in the University of Pennsylvania, a former president of the American Neurological Society, and the author of several well-known textbooks on nerve diseases, aged 68; Dr. John O. Roe, of Rochester, New York, one of the leading laryngologists in the United States and a former president of the American Laryngological Association, aged 75; Dr. George P. Shears, clinical professor of obstetrics in the New York Polyclinic Medical School, aged 53; Dr. A. Alexander Smith, professor of the principles and practice of medicine and clinical medicine at the University and Bellevue Hospital Medical College, aged 69; Dr. W. P. Spratling, from 1894 to 1908 medical superintendent of the Craig Colony for Epileptics, Sonyea, New York, and later professor of physiology and nervous diseases in the College of Physicians and Surgeons, Baltimore, aged 52; Dr. Thuilié, formerly president of the Paris Municipal Council and vice-president of the Superior Council or the Assistance Publique, aged 84; and Dr. Vaillant, one of the members for Paris.

The Services.

EXCHANGE DESIRED.

CAPTAIN (November, 1914) in 2nd line Territorial Field Ambulance, at present stationed in Scotland, wishes to exchange with officer in Field Ambulance in France.—Address No. 1050, BRITISH MEDICAL JOURNAL Office, 429, Strand, W.C.

Universities and Colleges.

NATIONAL UNIVERSITY OF IRELAND.

Special Medical Examinations.

THE Senate of the National University of Ireland has directed that the special examination for medical degrees to be held in June next shall be open only to candidates who, if qualified as a result of that examination, undertake to apply at once for commissions in the Indian Medical Service, the Royal Army Medical Corps, or the Naval Medical Service.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

A COMITIA was held on March 7th, Dr. Frederick Taylor, the President, being in the chair.

A letter was received from the Council of the Royal Society with reference to the establishment of a Conjoint Board of Scientific Societies for the purpose of promoting the co-operation of those interested in pure or applied science, and asking the College to nominate two representatives to meet the Council of the Royal Society at a conference to be called at an early date. The President was asked to nominate two Fellows to act as representatives.

The greater part of the time was occupied with the discussion of a subject which was declared to be "secreta Collegii."

APOTHECARIES' HALL OF IRELAND.

THE Court of Directors has adopted a resolution placing on record its regret at the death in action of Captain Seymour Stritch, an ex governor, as announced in the BRITISH MEDICAL JOURNAL of February 19th, p. 288, and expressing its sympathy with his widow and relatives.

Medical News.

AT the meeting of the Royal Microscopical Society on Wednesday next, at 8 p.m., Professor J. Arthur Thomson will speak on original factors in evolution, and Sir E. Ray Lankester on the supposed exhibition of purpose and intelligence by the foraminifera.

AT the meeting of the Medical Society of London on March 20th, at 8.30 p.m., a discussion on gunshot wounds of the spine will be introduced by Captain James Collier and Lieutenant-Colonel Donald Amour, F.R.C.S., who will deal respectively with the medical and surgical aspects of the subject.

THE Italian Government has decided to grant official recognition to the national factory of artificial limbs for men who have been maimed in the war, recently established at Milan with a capital of £8,000 collected by a committee for the purpose of supply orthopaedic apparatus at cost price.

IT is announced that Harvard University proposes to establish a course of military medicine in its graduate medical school. It is to be under the charge of Major Weston P. Chamberlain of the United States Army.

AT the annual meeting of the governors of Queen Charlotte's Hospital it was reported that since the outbreak of war over 1,600 wives of soldiers and sailors had been admitted to the wards of the hospital or attended and nursed in their own homes at a cost to the hospital of nearly £3,000.

THE Bureau of the American Census, in a report recently issued, states that the number of suicides recorded in the United States in 1914 was 10,933, or 16 per 100,000 of population. In 3,286 cases death was caused by shooting, in 3,000 by poisoning, in 1,552 by hanging or strangulation, in 1,419 by asphyxia, in 658 by the use of knives or other cutting or piercing instruments, in 619 by drowning, in 225 by jumping from high places, in 89 by crushing, and in 85 by other methods.

DR. W. W. KEEN, of Philadelphia, Emeritus Professor of Surgery in Jefferson Medical College, has been re-elected President of the American Philosophical Society for 1916.

THE supply of vehicles has run so short in Vienna that the work of medical men, particularly by night, has been greatly embarrassed. The Viennese doctors, with the help of the police, clubbed together and secured one motor car, to be kept ready all night at the disposal of the medical profession in a central garage. But even this modest provision appears to have proved very costly.

THE Cavendish Electrical Company (105, Great Portland Street, London, W.) has issued a pamphlet on the equipment of the electrical department of a military hospital or convalescent camp, a matter on which the company has had considerable experience. The pamphlet contains illustrated accounts of a large variety of apparatus.

ON March 1st a goodly company assembled at Dr. Williams's Library, University Hall, W.C., for the annual meeting of the Mental After-Care Association. After a few opening remarks from the Dean of Westminster (Bishop Ryle), who presided, the report for 1915 was read and proposed for adoption by Dr. Henry Rayner, the chairman of Council. It showed that in spite of the war the work of the association had been actively carried on; 379 cases had applied for assistance, which was afforded, to all found suitable, in the way of supplying temporary homes on leaving asylum care, grants of clothing and of tools, as well as attention to health, and finding situations for which they were fitted. The strongest evidence of the utility of the charity was, however, afforded by the prevention of relapses. The resignation, through ill health, of Mr. Thornhill Roxby, after twenty-eight years' strenuous and sympathetic work as secretary, was regretfully alluded to. Miss E. D. Vickers, who has had long experience as assistant and acting secretary, has been appointed in his place. The receipts from all sources during 1915 amounted to £1,370 6s. 8d., and, though subscriptions had only slightly fallen off during the war, there was need for fresh efforts to meet adequately the calls on the association. The trustees of the Queen Adelaide Fund had arranged to secure the co-operation of the association in investigating the conditions of patients discharged from the London County Council asylums in view of a grant from that fund, and this will eventually mean a largely increased scope of work. The adoption of the report was seconded by Dr. Percy Smith, supported by Mr. Goodrich, L.C.C., and carried, as was the financial statement.

Letters, Notes, and Answers.

THE telegraphic addresses of the BRITISH MEDICAL ASSOCIATION and JOURNAL are: (1) EDITOR of the BRITISH MEDICAL JOURNAL, *Aitiology, Westrand, London*; telephone, 2631, Gerrard. (2) FINANCIAL SECRETARY AND BUSINESS MANAGER (advertisements, etc.), *Articulate, Westrand, London*; telephone, 2630, Gerrard. (3) MEDICAL SECRETARY, *Medisecra, Westrand, London*; telephone, 2634, Gerrard. The address of the Irish office of the British Medical Association is 16, South Frederick Street, Dublin.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

LETTERS, NOTES, ETC.

EPSOM COLLEGE.

ON October 16th, 1909, Dr. John Herbert Wells, of the Inoculation Department of St. Mary's Hospital, died after eighteen months of suffering from glanders contracted in the laboratory in the course of a research on the treatment of that disease. He was only 30 at the time of his death, and left a widow and two young children almost totally unprovided for. His son, John Clayworth Spencer Wells, aged 8, is a candidate for a foundation scholarship at Epsom College at the 1916 election. The case seems to us an exceptionally deserving one in view of the fact that the boy's father died a martyr to science. We may add that it is strongly supported by Lord Moulton, Lord Ribblesdale, Mr. Arthur Balfour, Sir Almroth Wright, and Sir W. Arbuthnot Lane.

TRENCH NEPHRITIS.

DR. J. C. MCWALTER (Dublin) writes: There is some reason to think, I submit, that epidemic nephritis or trench nephritis is a renal manifestation of a paratyphoid affection. None of the British experts seem to favour this view, but it has lately been advocated by observers in Vienna. What are the known facts? An inflammatory affection of the kidneys is suddenly found to attack a large number of previously healthy men under 40. They present two characteristics differentiating them from other men of the same class: they live in trenches, and they have all been inoculated against enteric fever. In former campaigns, as in Africa, men, mostly not inoculated, developed enteric under like conditions. Typhoid is comparatively rare in the present campaign, but there are various paratyphoid conditions prevalent. Osler states that there is a renal form of typhoid. I have found bacilluria present in epidemic nephritis long after the original attack.

MAGNESIUM SULPHATE LOTION IN CELLULITIS.

LIEUTENANT S. A. B. PAYMASTER, I.M.S., Cameroons Expeditionary Force, writes that from the beginning of the war he has used a lotion of supersaturated solution of magnesium sulphate (35 grains to an ounce of cold water) with remarkable results in lymphangitis, cellulitis, erysipelas (especially of cellulo-cutaneous type), orchitis, epididymitis, and all other vague oedemas and swellings. The lotion is applied frequently. The pain, tenderness, and swelling markedly decrease from the first day and disappear in a few days.

ANA OBSTETRICA FOR THE CURIOUS.

TIRESIAS writes: At a distant farm in the weald of Kent the other day I learnt that the father of my patient was one of a family of twenty-two children, most of whom survive. On the way home my chauffeur (a native of the part) told me of an old lady in the town near that used to say she had had twice two and twenty children, explaining the riddle by the remark that she had had twenty-two straight on; one died and then she had another, thus having twenty-two twice over. More than forty years ago, in a town in the West Riding, an old lady I met at a confinement also told me she had had twice two and twenty children. Her solution was different—twins twice and twenty after had been the order of the arrows in her quiverful, but she added that very few of them were at that time alive. At a maternity case the other day the mother assured me that she was one out of nineteen, fifteen of whom still survive.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

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Seven lines and under	0	5.	0
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NOTE.—It is against the rules of the Post Office to receive *poste restante* letters addressed either in initials or numbers.